

ENGLISH MEDIUM

All India Staff Nurse

Chapterwise Solved Papers

Youth
Competition
Times

UPPSC/UPNHM-CHO/AIIMS/DSSSB

- RRB ■ BHU ■ ESIC ■ RML ■ MPCHO ■ MP Staff Nurse ■ RPSC ■ PGI ■ MNS
- ARMY CGFNS ■ RUMS ■ JIPMER ■ KPSC ■ DME ■ BTSC ■ BIHAR NHM ■ ILBS
- NVS ■ ISRO ■ CRPF ■ JHMCS ■ UPRVUNL ■ GMCH ■ SSB DD & DNH ■ HAAD
- KERALA PSC ■ PROMETRIC ■ MOH ■ B.Sc. NURSING ■ G.N.M. NURSING
- ARMY,NAVY ■ NURSING OFFICER ■ ALL NURSING COMPETITIVE EXAMS



STAFF NURSE

CHAPTERWISE

Solved Papers



7881

Objective Questions

NURSING

GENERAL KNOWLEDGE

GENERAL HINDI

GENERAL ENGLISH

Answer with Detailed Explanation
and as per Revised ANSWER-KEY

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UPPSC STAFF NURSE

PLAN OF EXAMINATION

1. General Knowledge	- 30 Questions (Objective Type)
2. General Hindi	- 20 Questions (Objective Type)
3. Main Subject (Nursing)	- 120 Questions (Objective Type)
Total Questions	- 170 Questions
Examination Period (Time)	- 02 Hours (120 Minutes)
Total Marks	- 85 Marks

SYLLABUS

1. GENERAL KNOWLEDGE

- (1) **History of India and Indian National Movement:-** In History of India, emphasis should be on broad understanding of social, economic and political aspects of Indian history. In the Indian National Movement, the candidates are expected to have synoptic view of the freedom movement, growth of nationalism and attainment of Independence.
- (2) **Indian and World Geography- Physical, Social, Economic Geography of India and the World:-** Questions on the Geography of India will relate to Physical, Social & Economic Geography of India. In World Geography only a general understanding of the subject will be expected.
- (3) **Indian Polity and Governance, Constitution, Political System, Panchayati Raj & Public Policy, Rights - Issues etc:-** In Indian polity and Governance questions will test knowledge of country's constitution, political system including Panchayati Raj and Community Development.
- (4) **Indian Economy and Social Development:-** The candidates will be tested with respect to problems and relationship between population, Environment, Urbanisations; broad features of economic policy in India and Indian Culture.
- (5) **Current Events of National and International Importance:-** This will also include questions on Games & Sports.
- (6) **Indian Agriculture:-** The candidates will be expected to have general understanding of agriculture in India, agricultural produce and its marketing.
- (7) **General Science:-** Questions on General Science will cover general appreciation and understanding of science including matters of everyday observation and experience, as may be expected of a well educated person, who has not made a special study of any scientific discipline. This will also include questions on role of science and technology in the development of India.
- (8) **Elementary Mathematics up to class 10th level:-**Arithmetic, Algebra and Geometry.
Note:- The candidates are expected to have general awareness about the above topics with special reference to U.P.

2. GENERAL HINDI

- (i) विलोम (ii) वाक्य एवं वर्तनी शुद्धि (iii) अनेक शब्दों के एक शब्द (iv) तत्सम एवं तद्भव शब्द (v) विशेष्य एवं विशेषण (v) पर्यायवाची शब्द

3. NURSING

1. **Anatomy & Physiology:** Skeletal System, Muscular System, Cardio-Vascular System, Respiratory System, Digestive System, Excretory System, Nervous System, Endocrine System, Reproductive System and Sense Organs.

-
2. **Fundamentals of Nursing:** Nursing as a profession, Maintenance of therapeutic Environment, Nursing Process and Nursing Care Plan, Admission and Discharging of a Patient, The Dying Patient, Hygienic needs and Physical needs, Activity and Exercises, Safety needs, Elimination needs, Care and special condition, Meeting nutritional needs, Observation of Patient, Care of Equipments, Barrier Nursing, administration of drugs, Recording and Reporting.
 3. **First Aid:** Meaning and Rules of First Aid Emergency situation such as Fire; Earthquakes; Famines; Fractures; Accident; Poisoning; Drowning; Haemorrhage; Insects bites; Foreign bodies Transportation of the injured, Bandaging and splinting, Immediate and later role of nurse
 4. **Medical-Surgical Nursing:** Role and Responsibilities of Nurse in Medical and Surgical Setting. Care of Surgical patient, Anesthesia. Diseases of Cardiovascular System, Gastro Intestinal System, Genito Urinary System and Nervous System. Disorder and Diseases of the Respiratory System, Musculo-Skeletal System. Blood Disorder and Blood Transfusion. Endocrine System, Metabolic disorders, deficiency diseases: Hyper and Hypo Secretions, Cysts/Tumours, Diabetes Mellitus, Obesity Gout. The diseases of skin, Ear, Nose and Throat. Diseases and Disorder of Eye, Intensive care Nursing. Common deficiency diseases, Prevalence in India, Early symptoms, prevention and treatment. Communicable Diseases: Virus, Bacteria, Zoonoses and Mosquito.
 5. **Psychiatric Nursing:** Introduction, Community Responsibility, Diagnosis, Management and Role of the Nurse.
 6. **Community Health Nursing:** Concept, Definition of Community Health, difference between:- Institutional and community health nursing, qualities and function of community health nursing, Aspects of Community Health Nursing, Demography and Family Welfare.
Health Team: Composition at Community Health Centre (CHC), Primary Health Centre (PHC); Sub-Centre. Role of Nursing Personnel at Various levels: Male & Female Health Worker, Health Supervisor, Public Health Nurse, Public Health Supervisor, Vital Health Statistics. Health education and Communication skills.
 7. **Midwifery and Gynecological Nursing:** Introduction and Definition, Normal Pregnancy, Prenatal care, Care and advice regarding diet in pregnancy, ante-natal exercises, Minor disorders of pregnancy and alleviations of discomfort, Diseases associated with pregnancy Normal Delivery Preparation: Normal labour - First stage, Second stage and Third stage of labour, Nursing Management of Baby and birth, Nursing Management of mother during puerperium, Complication of pregnancy and its management, High risk pregnancy and its management, Labour Complications, Complications of puerperium and its management, Obstetrics operations, Drugs used in Obstetrics, Ethical and legal aspects related to midwifery and Gynaecological Nursing, Fertility and Infertility Diseases and disorders of female reproductive system including breasts.
 8. **Paediatric Nursing:** Concept in Child health care and role of Paediatric nurse in child care, The healthy child, The Infant, Disorder of Infant, Recognition and Management of congenital anomalies, Breast Feeding, Introduction of Solids, Pre and post Operative care and Preparation of parents for surgery of the infant child.
Diseases of Children: Etiology, Signs and Symptoms, medical and surgical management, nursing care, Complication, diet, and drug therapy, prevention and treatment with diseases - Gastro-intestinal system, Respiratory System, Genitourinary System, Cardio Vascular system, Nervous System, Eye and ear, Nutritional Disorder, Communicable diseases, Hemotological disorder, Endocrine disorder Child health Emergencies, Psychological disorder problems and the handicapped Child.
 9. **Professional Trends and Adjustment:** Definition and criteria of Nursing profession, Qualities of a professional nurse, Personal Professional Growth and Continuing Education Career in Nursing.
Professional related organisations: International Council of Nurse (ICN), Indian Nursing Council (INC), State Nursing Council, World Health Organisation, UNICEF, Trained Nurse Association of India (TNAI), Red Cross Legislation in Nursing.
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- 10. Microbiology:** Scope and usefulness of knowledge of microbiology in Nursing, Classification of Micro-organisms and factors influencing growth, Sources of Infection, Portals of Entry and Exit of microbes, Transmission of infection, Collection of Specimens and Principles to kept in mind while collection specimen, Immunity, Control and destruction of micro-organisms.
- 11. Psychology:** Definition, Scope and importance for Nurses.
Psychology of human behavior: Emotions, Attitudes, Frustration and Defense mechanisms, Personality, Intelligence and related Factors, Learning and Observation.
- 12. Sociology:** Importance of Sociology in Nursing. The Socio-cultural and Economic aspects of the community and their effects in health and illness.
The Family: Family as a social institution and basic unit for health service, Basic needs of family, Advantages of Planned parenthood.
The Society: Concept of society, Rural and Urban Society, Social Problems, unmarried mothers, dowry System, drug addiction, alcoholism, delinquency, handicapped, child abuse, domestic violence, women abuse, Social agencies and remedial measures.
Economy: Resources of the country - Natural, occupational, agricultural, Industrial, etc.
Social Security: Population explosion - its effect on economy and the need for population control, Budgeting for a family, per capita income and its impact on health and illness.
- 13. Personal Hygiene:** Maintenance of Health, Physical health and Mental Health.
- 14. Environmental Hygiene:**
Water: Safe & wholesome water, Uses of water, Water pollution, Water borne disease and water purification.
Air: Air pollution, prevention & Control of Air pollutions.
Waste: Refuse, Excrete, Sewage, Health hazards of these wastes collection, removal and disposal of the wastes, Housing, Noise.
- 15. Computer in Nursing:** Disk operating systems, Use of computer in Nursing, Internet & Email in Nursing.

UP NHM CHO EXAM SYLLABUS

S.No	Subject	No. Of Question	Marks
1	General Knowledge	20	20
2	Aptitude & Reasoning	20	20
3	English	20	20
4	Nursing	40	40
	Total	100	100
	Duration	120 Minutes	

NURSING

1. Clinical Pathology
2. Biochemistry
3. Pharmacognosy
4. Health Education & Community Pharmacy
5. Hospital & Clinical Pharmacy
6. Accountancy
7. First Aid
8. Anatomy & Physiology
9. Paediatric Nursing
10. Toxicology
11. Psychiatric
12. Nursing
13. Mental Health
14. English
15. Nursing Management
16. Community Health Nursing
17. Fundamentals of Nursing
18. Human Anatomy & Physiology
19. Pharmaceutics
20. Pharmaceutical Chemistry
21. Drug Store Management
22. Pharmacology
23. Midwifery & Gynaecological Nursing
24. Commerce
25. Microbiology
26. Sociology
27. Psychology
28. Pharmaceutical Jurisprudence
29. Health Educational & Communication Skills
30. Computers in Nursing
31. Medical-Surgical Nursing
32. Nutrition
33. Personal Hygiene.

General English :

1. Reading Comprehension,
2. Verbal Reasoning
3. Comprehension
4. Sentence Correction
5. Passage Completion
6. Sentence Completion
7. Word Formation
8. Error Correction
9. Theme detection

10. Fill in the Blanks
11. Unseen Passages
12. Idioms & Phrases
13. Passage Correction
14. Idioms and Phrases
15. Subject-Verb Agreement
16. Antonyms and Synonyms
17. Sentence Rearrangement
18. Verbal Ability
19. Analogies
20. Syllogisms
21. Vocabulary
22. Conclusion.

General Knowledge :

1. Society
2. Uttar Pradesh General Knowledge
3. Authors
4. Top events in the State
5. Arts, Sports
6. Important Schemes for Development
7. Literature
8. Culture
9. Tourism Places
10. Heritage
11. Famous Rivers
12. Pilgrimage Places
13. Polity.

General Reasoning :

1. Arithmetical Reasoning
2. Directions
3. Blood Relations
4. Embedded Figures
5. Mirror Images
6. Cubes and Dice
7. Decision Making
8. Coding-Decoding
9. Clocks and Calendars
10. Analogy
11. Non-Verbal Series
12. Number Ranking
13. Alphabet Series
14. Number Series.

MP NHM CHO Syllabus

S. No.	Subject	No. of Questions	Marks
1	Physiology	05	05
2	Anatomy	05	05
3	Demography and common health statistics	05	05
4	Community Health , Epidemiology and disease prevention	10	10
5	Maternal Health (Pregnancy and child birth)	10	10
6	Child health and Nutrition	10	10
7	Immunization	05	05
8	Adolescent health	05	05
9	Family Planning	05	05
10	Common Communicable diseases	10	10
11	Non Communicable Diseases	10	10
12	National Health Programs	10	10
13	General Knowledge	10	10
	Total	100	100
	Duration	120 Minutes	

The syllabus for this written examination is as detailed below.

Sr. No.	Subject
1.	Physiology
2.	Anatomy
3.	Demography and common health statistics
4.	Community Health, Epidemiology and Disease Prevention
5.	Maternal Health (Pregnancy and Childbirth)
6.	Child health and Nutrition
7.	Immunization
8.	Adolescent health
9.	Family Planning
10.	Common Communicable diseases
11.	Non-Communicable Diseases
12.	National Health Programs
13.	General Knowledge
14.	Analytical and Communication Skills

ANALYSIS OF QUESTION PAPERS

Staff Nurse Recruitment Exam

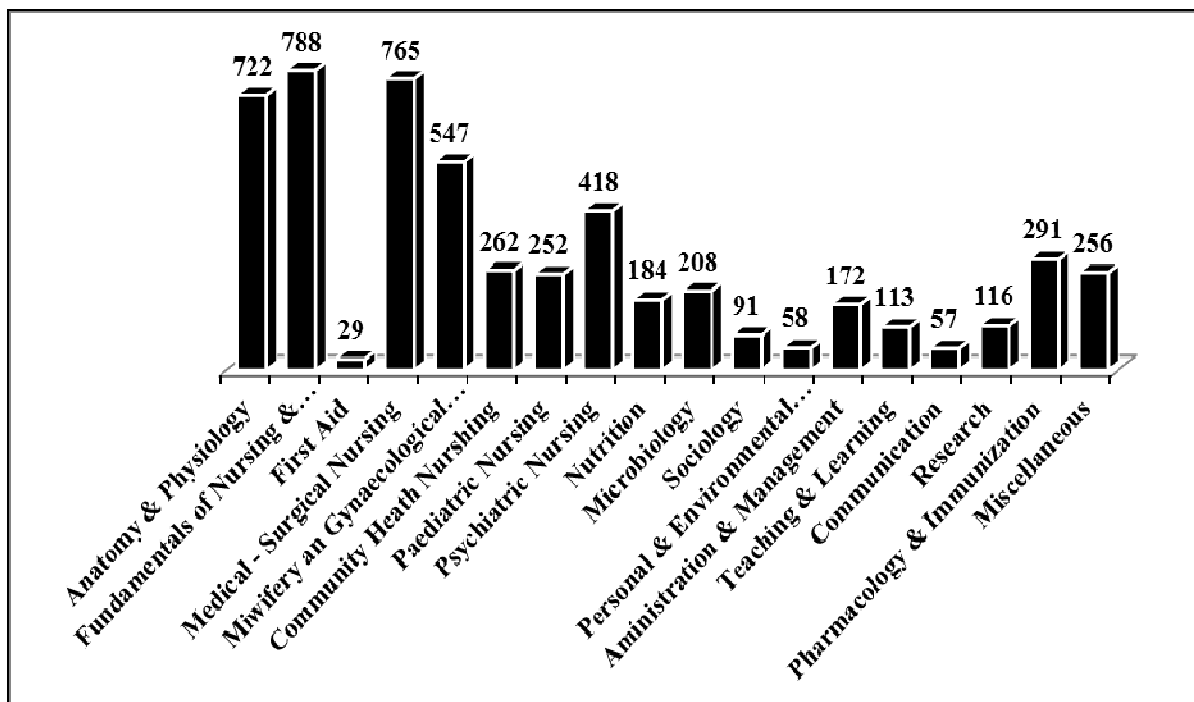
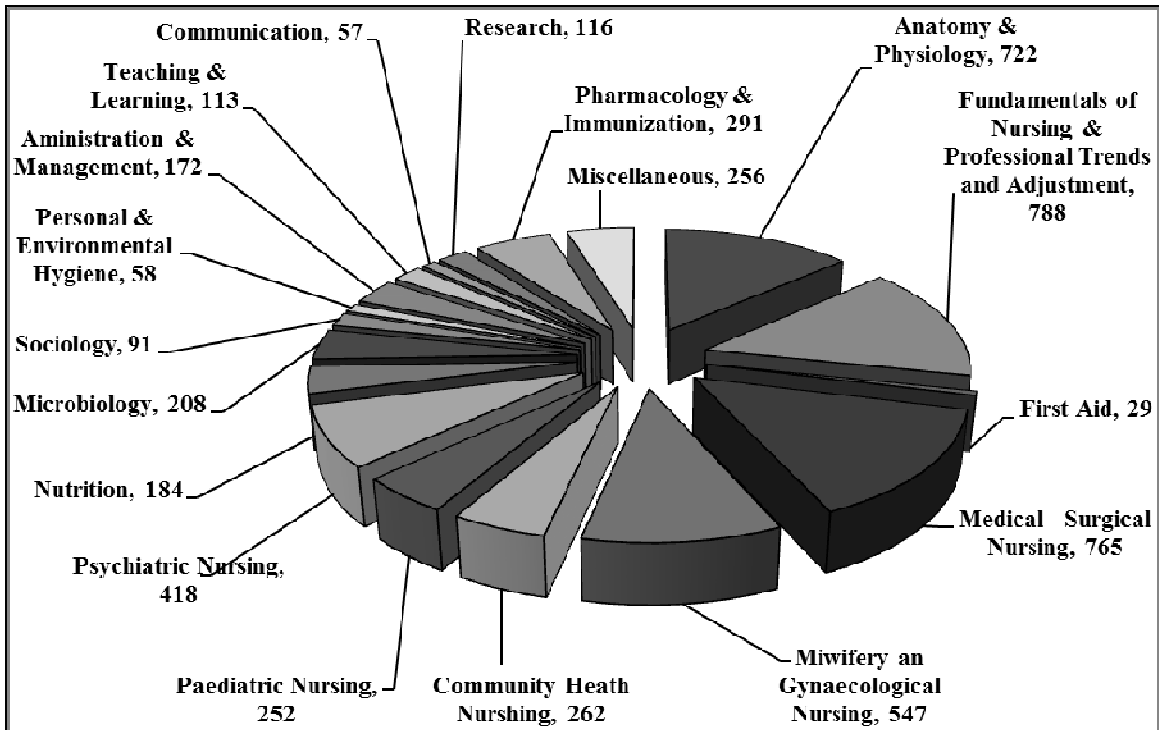
Sr.	Name of Exam and Years	Number of Questions
1.	UPPSC Staff Nurse Exam (Date : 10.04.2022)	170
2.	UPPSC Staff Nurse Exam (Date : 03.10.2021)	170
3.	UPPSC Staff Nurse Exam (Date : 17.12.2017)	170
4.	UP NHM Staff Nurse Exam (Shift-I) Exam Date : 24.01.2021	100
5.	UP NHM Staff Nurse Exam (Shift-II) Exam Date : 24.01.2021	100
6.	HPSSC STAFF NURSE 05.08.2021	170
7.	Kerala PSC Staff Nurse 09-07-2021	100
8.	MP CHO Staff Nurse Exam (Shift-I) Exam Date : 27.06.2021	100
9.	MP CHO Staff Nurse Exam (Shift-II) Exam Date : 27.06.2021	100
10.	Gujarat Commissionerate Of Health (Coh) Staff Nurse 20-06-2021	100
11.	KERALA PSC STAFF NURSE 30-01-2021	100
12.	Maharashtra CHO Exam (Set - A) (Staff Nurse) 16-October-2020	50
13.	AIIMS Nagpur Nursing Officer/Staff Nurse exam Grade-II, Exam. 28/2/2020	100
14.	Central Council For Research in Ayurvedic Science 18-12-2019 Staff Nurse	70
15.	Bihar CHO Exam 2019 Nursing Officer	56
16.	BHU Nursing Officer Staff Nurse Exam (Shift-I) Exam Date : 22.09.2019	120
17.	NVS Staff Nurse Staff Nurse Exam Exam Date : 19.09.2019	120
18.	DSSSB Staff Nurse Exam (Shift-I) Exam Date : 30.08.2019	200
19.	DSSSB Staff Nurse Exam (Shift-I) Exam Date : 29.08.2019	200
20.	DSSSB Staff Nurse Exam (Shift-II) Exam Date : 29.08.2019	200
21.	DSSSB Staff Nurse Exam (Shift-I) Exam Date : 28.08.2019	200
22.	DSSSB Staff Nurse Exam (Shift-II) Exam Date : 28.08.2019	200
23.	DSSSB Staff Nurse Exam (Shift-III) Exam Date : 28.08.2019	200
24.	DSSSB Staff Nurse Exam (Shift-III) Exam Date : 27.08.2019	200
25.	AIIMS Raipur Nursing Officer (Mains) Staff Nurse Exam 2019	100
26.	AIIMS Raipur Nursing Officer Mains- 2019 GR II Set-1	100
27.	AIIMS Raipur Nursing Officer Staff Nurse- 2019 GR II Set-2	80
28.	RRB Staff Nurse Exam (Shift-I) Exam Date : 21.07.2019	100
29.	RRB Staff Nurse Exam (Shift-II) Exam Date : 21.07.2019	100
30.	RRB Staff Nurse Exam (Shift-I) Exam Date : 20.07.2019	100
31.	RRB Staff Nurse Exam (Shift-II) Exam Date : 20.07.2019	100
32.	RRB Staff Nurse Exam (Shift-III) Exam Date : 20.07.2019	100
33.	MIZORAM (PSC) Staff Nurse May 2019 Paper II	65

34.	MIZORAM (PSC) Staff Nurse May 2019	75
35.	BHU Nursing Officer Exam Staff Nurse Exam Exam Date : 24.06.2018	100
36.	All India Institute of Medical Sciences Bhopal Nursing Officer Staff Nurse Grade-II, Exam. 23-05-2018 (1 st Shift)	100
37.	NVS Staff Nurse Exam (Exam Date : 12.01.2018)	100
38.	SSB DD & DNH Staff Nurse Exam 2018	100
39.	AIIMS BHUBANESWAR Staff Nurse Exam 2018	120
40.	DME Karnataka Recruitment Staff Nurse Exam 2018	100
41.	KERALA PSC STAFF NURSE 27-02-2017	100
42.	Central Council for Research in Siddha Staff Nurse Dated 28-05-2017	70
43.	RUHS MSC. Staff Nurse Exam 2017	120
44.	AIIMS Jodhpur and Rishikesh Staff Nurse Exam 2017	150
45.	AIIMS RAIPUR (Shift - I) Staff Nurse Exam 2017	100
46.	AIIMS RAIPUR (Shift - II) Staff Nurse Exam 2017	100
47.	AIIMS RAIPUR (Shift - III) Staff Nurse Exam 2017	100
48.	DSSSB (Shift - I) Staff Nurse Exam 2017	200
49.	DSSSB (Shift - II) Staff Nurse Exam 2017	200
50.	ESIC (Employees State Insurance Corporation.) Staff Nurse Exam New Delhi-2016 (Shift-I) Exam Date : 01.03.2017	125
51.	ESIC Staff Nurse Exam New Delhi-2016 (Shift-II) Exam Date : 01.03.2017	125
52.	ISRO Nurse-B Staff Nurse Exam (Exam Date : 27.11.2016)	100
53.	Kerala PSC Staff Nurse Date: 19-02-2016	100
54.	KERALA STAFF NURSE, 2016, 28 JANUARY 2016	100
55.	KERALA STAFF NURSE, 2015, 23 APRIL, 2015	100
56.	RRB Staff Nurse Exam 2015 (Exam Date : 08.02.2015)	120
57.	CGPSC Nursing-2015	100
58.	CRPF Staff Nurse Exam 2014	100
59.	DSSSB Staff Nurse Exam 2013	200
60.	Madhya Pradesh Staff Nurse Exam 2013	100
61.	RRB Staff Nurse Grade-II Exam 2012	120
62.	Ram Manohar Lohiya Hospital Staff Nurse 2011	115
63.	RPSC Staff Nurse Grade-II Exam 2010	100
64.	RPSC Nursing Tutor Examination 2009	100
65.	RRB Staff Nurse Grade-II Exam 2008	100
66.	RPSC STAFF NURSE 2007	100
	Total	7881

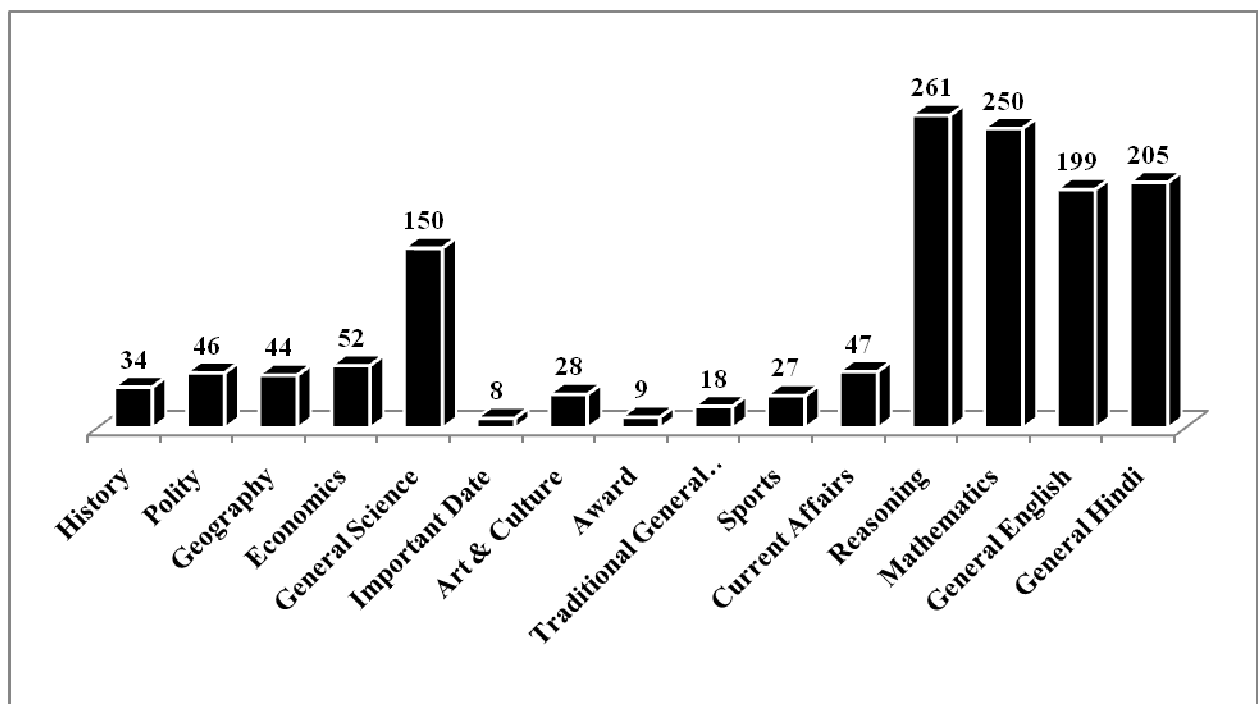
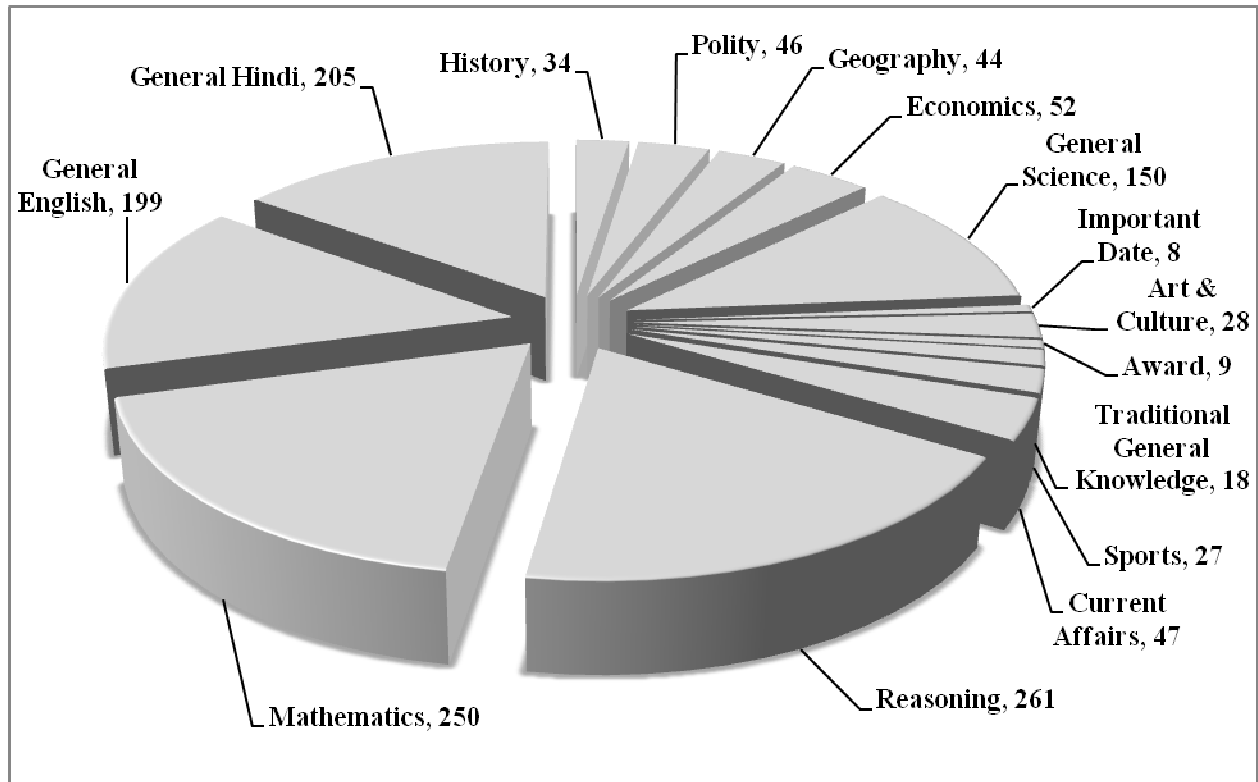
Note:- After due analysis of the above question papers, a chapterwise compilation of **6701** questions out of total 7881 questions related to Staff Nurse has been presented, removing the questions of repetition and similar nature. The exam name and exam year of the repeated questions have been specified in place.

Trend Analysis of Previous Year Papers Through Pie Chart and Bar Graph

Section-I (Nursing)



Section -II (General Knowledge, English, सामान्य हिन्दी)



01. ANATOMY AND PHYSIOLOGY

i. Digestive System

1. Largest gland in the body :

- (a) Liver (b) Pancreas
(c) Spleen (d) Prostate

UPPSC Staff Nurse 10-04-2022

Kerala Staff Nurse (28/01/2016)

Kerala PSC Staff Nurse (19/02/2016)

Ans. (a) : The liver is the largest gland in the human body. It is situated on the right side of the abdomen. The liver is split into the left and the right lobe, separated by the falciform ligament. The hepatocytes, the liver cells, have a unique potential to reproduce in response to any liver injury.

2. The highest rate of absorption of drugs is in -

- (a) Large intestine (b) Stomach
(c) Gall bladder (d) Small intestine

[RRB Staff Nurse Exam 2015]

RRB Staff Nurse-2015 (08-02-2015)

Ans. (a) The highest rate of absorption of drugs is in the large intestine. The large intestine is the last part of the gastrointestinal tract (GIT) that performs the important task of absorbing water and vitamins while converting digested food into feces.

3. Function of gastrin is :

- (a) Inhibits gastric secretion & motility
(b) Stimulates gastric secretion and inhibits gastric motility
(c) Stimulates gastric secretion and motility
(d) Inhibits gastric secretion and stimulate gastric motility

Kerala (PSC) Staff Nurse (30/01/2021)

Ans. (c) : Gastrin has two principal biological effects; stimulation of acid secretion from gastric parietal cells and stimulation of mucosal growth in the acid-secreting part of the stomach. Circulating gastrin regulates the increase in acid secretion that occurs during and after meals.

Note:- Gastrin is a peptide hormone which is released by G cells in the pyloric antrum of the stomach, duodenum and the pancreas.

4. Saliva contains an enzyme that acts upon which of the following nutrients _____ .

- (a) Protein (b) Fat
(c) Starch (d) Minerals

MP CHO 27/07/2021 (Shift-I)

Ans. (c) : The digestion process starts immediately after the food is put in the mouth. The saliva which is present in the salivary glands produces enzymes such as amylase, lysozyme and lingual lipase. It is the salivary amylase which breaks the starch present in the food. Starch are actually sugar molecules which are attached to each other closely as if in a long chain.

5. Which part or parts of the pharynx have both respiratory and digestive functions?

- (a) Nasopharynx and oropharynx
(b) Oropharynx only
(c) Oropharynx and laryngopharynx
(d) Laryngopharynx only

HPSSC Staff Nurse (05/08/2021)

Ans. (c) : The Pharynx, commonly called the throat is a passageway that extends from the base of the skull to the level of the sixth cervical vertebra. It serves both the respiratory and digestive systems by receiving air from the nasal cavity and air, food and water from the oral cavity.

It has three subdivisions. The most superior, the nasopharynx, is involved only in breathing. The other two subdivisions, the oropharynx and the laryngopharynx, are used for both breathing and digestion.

6. Payer's patches are found in

- (a) Stomach (b) Liver
(c) Small intestine (d) Large intestine

RUHS MSC. Nursing Exam-2017

Ans : (c) Payer's patches are located in your small intestine usually in the Ileum area. The ileum is the last portion of your small intestine. In addition to further digesting the food you eat the ileum also absorbs water and nutrients from food.

7. Peyer's patches are present in:

- (a) Stomach (b) Jejunum
(c) Ileum (d) Duodenum

ISRO Satellite Centre, Bengaluru Staff Nurse -27/11/2016

Ans : (c) See the explanation of above question.

8. _____ is known as abdominal policeman.

- (a) Appendix (b) Liver
(c) Meckel's diverticulum (d) Spleen
(e) Greater omentum

CGPSC Nursing Officer 2015

Ans. (e) : The Greater omentum is known as the policeman of the abdomen for its role in fighting intra-abdominal infection. Omentum is a large flat adipose tissue layer nestling on the surface of the intra-peritoneal organs.

9. Major protein digesting enzyme present in the pancreatic juice :

- (a) trypsin (b) aminopeptidase
(c) pepsin (d) dipeptidase

Kerala PSC Staff Nurse (27/02/2017)

Ans. (a) : Trypsin is secreted by the pancreas. It is a protein-digesting enzyme present in pancreatic juices secreted into the small intestine during a meal. The pancreas secretes trypsin which is an inactive proenzyme called trypsinogen.

10. Name an important protein digesting enzyme present in the gastric juice of human being?

- (a) Trypsin (b) Pepsin
(c) Chymotrypsin (d) Aminopeptidase

Kerala PSC Staff Nurse (23/04/2015)

Ans. (b) : Pepsin is the gastric juice acts on the proteins and forms peptones and proteoses.

Trypsin, Chymotrypsin and Carboxypeptidases are the proteolytic enzymes found in pancreatic juice which acts on the proteins peptones and proteoses and forms dipeptides.

Trypsin is an enzyme that helps us digest protein. In the small intestine, trypsin breaks down proteins continuing the process of digestion that began in the stomach. Gastric chief cells within the stomach secrete hydrochloric acid that lowers the pH of the stomach.

11. Identify the proteolytic enzyme present in the gastric juice.

- (a) Peptidase (b) Trypsin
(c) Chymotrypsin (d) Pepsin

DSSSB Staff Nurse 28/08/2019 (Shift-III)

Ans. (d) : See the explanation of above question.

12. Excess sugar on the body is stored in muscle and liver as :

- (a) Glucose (b) Glycogen
(c) Glucagon (d) Galactogen

Mizoram PSC Staff Nurse May 2019

Ans. (b) : Excess sugar on the body is stored in muscle and liver as glycogen. Most glycogen is stored in the liver and muscle cells. When these and other body cells are saturated with glycogen, excess glucose is converted to fat and is stored as adipose tissue.

13. Drugs are mainly metabolized in the :

- (a) Kidney (b) Colon
(c) Liver (d) Stomach

Mizoram PSC Staff Nurse May 2019

Ans. (c) : Most drugs must pass through the liver, which is the primary site for drug metabolism, once in the liver, enzymes convert pro-drugs to active metabolites or convert active drugs to inactive forms. The liver's primary mechanism for metabolizing drugs is via a specific group of cytochrome P-450 enzymes.

14. Which function of the pancreas increases the release of bile from the gall bladder into the intestine?

- (a) Choloretic action (b) Hydrotropic effect
(c) Cholagogue action (d) Emulsification

AIIMS Raipur Nursing Officer Mains 2019

Ans. (c) : A cholagogue is a medicinal agent which promotes the discharge of bile from the system, purging it downward.

15. Major protein digestive enzyme present in the pancreatic juice is -

- (a) Pepsin (b) Trypsin
(c) Dipeptidase (d) Aminopeptidase

KPSC Staff Nurse Exam-2017

Ans : (b) Trypsin is a proteolytic enzyme that helps in digestion of protein, proteoses and peptones. In the small intestine, trypsin breaks down proteins, continuing the process of digestion that began in the stomach. Trypsin is produced by the pancreas in an active form called trypsinogen.

16. The cells of gastric gland that secrete hydrochloric acid found in gastric juice are called.

- (a) Neck cells (b) Mucous cells
(c) Chief cells (d) Parietal cells

AIIMS Bhuneswar Staff Nurse Exam-2018

Ans : (d) Parietal cells are epithelial cells in the stomach that secrete hydrochloric acid (HCl) and intrinsic factor. These cells are located in the gastric glands found in the lining of the fundus and cardiac region of the stomach. Parietal cells are primarily regulated via acetylcholine, histamine and gastrin signalling from both central and local modulators. HCl breaks down proteins in the stomach for digestion and kills bacteria which enter in stomach.

17. Which of the following enzymes is not involved in the digestion of carbohydrates?

- (a) Lactase (b) Sucrase
(c) Amylase (d) Lipase

RRB Staff Nurse Exam – 21/07/2019 (Shift-II)

Ans : (d) sucrase breaks down sucrose (or 'table sugar') into glucose and fructose, and lactase breaks down lactose (or 'milk sugar') into glucose and galactose.

Starch and glycogen are broken down into glucose by amylase and maltase. Sucrose (table sugar) and lactose (milk sugar) are broken down by sucrase and lactase, respectively.

The salivary enzyme amylase begins the break down of food starch into maltose, a disaccharide

18. Inflammation of the tongue is known as:

- (a) halitosis (b) canthus
(c) gingivitis (d) glossitis

AIIMS Bhuneswar Staff Nurse Exam-2019

Ans : (d) Glossitis refers to inflammation of the tongue. The condition causes the tongue to swell in size change in color and develop a different appearance on the surface. Glossitis may cause the small bumps on the surface of the tongue (papillae) to disappear. Tongue inflammation may occurs if an allergic reaction to toothpaste, mouthwash, dentures, denture creams, or retainers. It may develops as - Chronic glossitis, Atrophic glossitis and Acute glossitis.

19. Palpation of an olive-shaped mass in the epigastrium is an indication of :

- (a) appendicitis
(b) malabsorption syndrome
(c) ulcerative colitis
(d) hypertrophic pyloric stenosis

DSSSB Staff Nursing-28/08/2019 (Shift-III)

Ans. (d) : Hypertrophic Pyloric stenosis should be suspected in any young infant with severe vomiting on physical exam palpation of the abdomen may reveal a mass in the epigastrium. This mass, which consists of the enlarged pylorus is referred to as the 'olive' and is sometimes evident after the infant is given formula to drink.

20. Breakdown of glycogen to glucose is known as:

- (a) Glycolysis (b) Proteolysis
(c) Glycogenolysis (d) Proteogeolysis

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (c) Glycogenesis is the process by which glycogen, the primary carbohydrate stored in the liver and muscle cells of animals is broken down into glucose to provide immediate energy to maintain blood glucose levels during fasting.

Glycolysis is the process by which one molecule of glucose is converted into two molecules of pyruvate, two hydrogen ions and two molecules of water. Through this process, the "high energy" intermediate molecules of ATP and NADP are synthesised.

21. What does the main cell of gastric gland secrete?

- (a) Pancreatic juice (b) Pepsinogen
(c) Hydrochloric acid (d) Intrinsic factor

[ESIC Staff Nurse Exam March II - 2016]

Ans. (b) Pepsinogen is an enzyme secreted by the main cell of gastric gland in the stomach wall and converted to the enzyme pepsin by gastric acid. It is a powerful and abundant protein digestive enzyme secreted by the gastric cells. It helps in the digestion of food, by protein degradation.

22. _____ is present in ptyalin-

- (a) Saliva (b) Pancreatic juice
(c) Gastric juice (d) Bile

[ESIC Staff Nurse Exam March II - 2016]

Ans. (a) Ptyalin is a type of enzyme present in the saliva. Saliva is a fluid substance formed in the mouths of animals secreted by salivary glands. Human saliva comprises of 98% of water plus electrolytes, mucus, white blood cells, enzymes (such as amylase & lipase, ptyalin), epithelial cells (from which DNA can be extracted, and antimicrobial agents IgA and lysozymes. Ptyalin is a type of amylase enzyme and it helps in the predigesting of starches.

23. Bile is formed by which organ of the body?

- (a) Liver (b) Pancreas
(c) Gall bladder (d) Small intestine

UPPSC Staff Nurse 03/10/2021

[ESIC Staff Nurse Exam March I - 2016]

Ans. (a) Bile or gall is a dark-green to yellowish brown fluid produced by the liver, that helps in the digestion of lipids in the small intestine. In humans, bile is produced continuously by the liver and stored and concentrated in the gallbladder. The composition of hepatic bile is (97-98%) water, 0.7% bile salts, 0.2% bilirubin, 0.51% fats (fatty acids, cholesterol and lecithin) and 200 mg/l inorganic salts.

24. The largest salivary gland is-

- (a) Parotid (b) Submandibular gland
(c) Subarachnoid (d) Extra dural

[ESIC Staff Nurse Exam II - 2016]

Ans. (a) The largest salivary gland is parotid gland. The parotid glands, located just in front of the ears on each side of the face are the largest of the three salivary glands i.e.- parotid, submandibular and sublingual. Parotid glands are responsible for producing saliva to aid in chewing and digesting food.

25. Which of the following polysaccharides is NOT digested by human enzymes and is a major constituent of dietary fiber?

- (a) Fructose (b) Starch
(c) Cellulose (d) Dextran

DSSSB Staff Nurse – 27/08/2019 (Shift-III)

Ans. (c) : Dietary fiber is the component in food not broken down by digestive enzymes and secrete ions of the gastrointestinal tract. This fiber includes hemicelluloses, pectin's, gums, mucilage's, cellulose, (all carbohydrates) and lignin, the only non-carbohydrate component of dietary fiber. Human cannot digest cellulose because they lack the enzymes essential for breaking the-acetyl linkage.

26. Which hormone stimulates the release of bile in digestion-

- (a) Gastrin (b) Secretin
(c) Calcitonin (d) Enterogastrone

[ESIC Staff Nurse Exam March I - 2016]

Ans. (c) Calcitonin is a 32 amino acid peptide hormone secreted by parafollicular cells (also known as C cells) of the thyroid gland in humans. It acts to reduce blood calcium (Ca), opposing the effects of parathyroid hormone (PTH). The calcitonin as hormones participates in calcium (Ca) and phosphorus metabolism. In many ways calcitonin counteracts parathyroid hormone (PTH) and vitamin D.

27. Enzyme which helps in digestion of fat

- (a) Amylase (b) Lipase
(c) Enterokinase (d) Tripsin

RPSC Staff Nurse Grade-II - 2010

Ans : (b) A lipase is any enzyme that catalyzes the hydrolysis of fats. (Trigly-ceride/lipids). Lipase, any of a group of fat-splitting enzymes found in the blood, gastric juices, pancreatic secretions, adipose tissues and intestinal juices.

28. Gastric juice is produced by-

- (a) Liver (b) Pancreas
(c) Stomach (d) Intestine

RRB Staff Nurse Grade-II - 2012

Ans : (c) Gastric juice is produced by the stomach. It is also known as gastric acid. It is a digestive fluid formed within the stomach lining, with a pH between 1 and 3 gastric juice plays a key role in digestion of proteins by activating digestive enzymes. These cells also produce mucous a viscous barrier to prevent gastric acid from damaging the stomach. Hydrochloric acid (HCl) potassium chloride (KCl) and sodium chloride (NaCl) is also found in these juices.

29. Which of the following is not a function of liver

- (a) Formation of bile
(b) Detoxification of drugs
(c) Storage of glucose
(d) Storage of bile

[AIIMS Patna Exam 2013]

Ans. (d) Liver is the body's largest organ. On average, it weighs around 3 pounds (1500 gram) in adulthood. The liver regulates most chemical levels in the blood and excretes a product called bile. This helps carry away waste stomach and intestines passes through the liver. It helps in detoxification of drugs and store glucose as well.

30. **Bilirubin is manufactured -**
 (a) By Haem (b) By globin
 (c) By transferrin (d) By Gastroferritin
[AIIMS Patna Exam 2013]

Ans. (a) Bilirubin is manufactured by Haem. It is an orange yellow pigment formed in the liver by the breakdown of hemoglobin and excreted in bile. Bilirubin is a fluid in the liver that helps to digest food. It is used to help find the cause of health conditions like jaundice, anemia and liver disease.

31. **Chyme is called ____ .**
 (a) Food in the mouth
 (b) Food in the stomach
 (c) Food reached in the stomach
 (d) Food reached in the rectum
RPSC Staff Nurse Grade-II - 2010

Ans : (b) Chyme is called food in the stomach. Chyme or chymous is the semi-fluid mass of partly digested food and digestive secretions that is formed in the stomach and intestine during digestion. In the stomach, digestive juices are formed by the gastric glands.

32. **The bag or reservoir of food is called-**
 (a) Oesophagus (b) Stomach
 (c) Small intestine (d) Large intestine
RRB Staff Nurse Grade-II - 2012

Ans : (b) The bag or reservoir of food is called stomach. The stomach is a muscular hollow organ in the gastrointestinal tract (GIT) of humans and many other animals. In the digestive system the stomach (as a vital digestive organ) is involved in the second phase of digestion, following chewing. It secretes digestive enzymes and gastric acid/HCl to aid in food digestion.

33. **In children, temporary or milk teeth are also called as :**
 (a) Molars (b) Incisors
 (c) Canines (d) Deciduous teeth
Mizoram (PSC) Staff Nurse 2019 (Paper-II)

Ans. (d) : Deciduous teeth also known as baby teeth, primary teeth, or milk teeth are your first teeth. They start developing during the embryonic stage and start to erupt through the gums about 6 months after birth. The molar teeth are large, flat teeth at the back of the mouth and are primarily used to grind food during chewing. Incisors are the sharp teeth at the front of the mouth that bite into food and cut it into smaller pieces.

34. **Peptic ulcer is caused by:**
 (a) Diet high in fat
 (b) Stress
 (c) Genetic effect
 (d) Helicobacter pylori infection
JHMCS Jhalawar Staff Nurse Exam

Ans : (d) Peptic ulcer is caused by Helicobacter pylori infection. Peptic ulcers are open sores that develop on inside lining of the stomach and the upper portion of the small intestine. The most common symptom of a peptic ulcer is stomach pain. Other causes- Smoking, radiation therapy, frequent use of aspirin and other inflammatory drugs etc.

35. **A major causative organism responsible for peptic ulcer is:**
 (a) Eschericia coli (b) Streptococi
 (c) Helicobacter pylori (d) Staphylococi
UPPSC Staff Nurse Exam – 17/12/2017

Ans : (c) See the explanation of above question.

36. **The process of taking food into the digestive system is :**
 (a) Ingestion (b) Propulsion
 (c) Digestion (d) Elimination
RRB Staff Nurse-2015 (08-02-2015)

Ans : (a) Ingestion is accomplished by taking in a substance through the mouth into the gastrointestinal tract, such as the rough eating or drinking. In single-celled organisms ingestion takes place by absorbing a substance through the cell membrane.

- Besides nutritional items, other substances which may be ingested include medication (oral administration) recreational drugs and substances considered inedible such as foreign bodies or excrement.
- Ingestion is a common route taken by pathogenic organisms and poison entering the body.

37. **Gastric glands are present in the wall of :**
 (a) Oesophagus (b) Stomach
 (c) Small intestine (d) Large intestine
ESIC Staff Nurse-2016 (01-03-2017 – Shift-II)

Ans : (b) Gastric glands are present in the wall of stomach. These are fundic glands, pyloric glands and cardiac glands. The various cells of the glands secrete mucus, hydrochloric acid, pepsinogen, intrinsic factor, gastrin and bicarbonate. **Gastric juice** is a mixture of water, HCl, electrolytes (Na, K, P, Ca, CO₃) and organic substance (pepsins, mucus and protein). This juice is highly acidic (pH value 1–3) and rich in enzymes, promoting digestion.

38. **In liver, bilirubin is conjugated with–**
 (a) Glucuronic acid (b) Bile acids
 (c) Cholic acid (d) Glutamic acid
AIIMS Bhuneswar Staff Nurse Exam-2018

Ans : (a) In liver, bilirubin enzyme is conjugated with glucuronic acid. Bilirubin is a yellow compound that occurs in the normal catabolic pathway that breaks down heme in vertebrates. It is a necessary process in the body's clearance of waste products that arise from the destruction of aged or abnormal red blood cells.

39. **The purpose of deep palpation is to assess.**
 (a) Skin turgor (b) Temperature
 (c) Organs (d) Hydration
SSB DD & DNH Staff Nurse Exam-2018

Ans : (c) Palpation is a method of feeling with the fingers or hands during physical examination. The purpose of deep palpation is to assess organs. Deep palpation of the abdomen is performed by placing the flat of the hand on the abdominal wall and applying firm, steady pressure.

40. **Edema is due to EXCEPT**
 (a) Increased hydrostatic pressure
 (b) Decrease hydrostatic pressure

- (c) Reduced oncotic pressure within blood vessels
- (d) Increased blood vessel wall permeability

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (b) Edema is swelling caused by excess fluid trapped in the body's tissues. It may notice more in the hands, arms, feet, ankles and legs. Signs include-structure or shiny skin, increased abdominal size, swelling or puffiness of the tissues directly under the skin, especially in the arms or legs, skin that retains a dimple (pits) after pressed for several seconds. It can be result of medication, pregnancy or an underlying disease- often congestive heart failure and kidney disease or cirrhosis of the liver.

41. _____ is invagination or telescoping of portion of the intestine into an adjacent, more distal section of the intestine, which creates a mechanical obstruction.

- (a) Intussusception
- (b) Hirschsprung's disease
- (c) Aneurism
- (d) Enterocolitis

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (a) **Intussusception** is invagination or telescoping of portion of the intestine into an adjacent, more distal section of the intestine which creates a mechanical obstruction.

42. The organ of digestive system most commonly involved in cystic fibrosis is _____.

- (a) Pancreas
- (b) Small intestine
- (c) Esophagus
- (d) Stomach

UPPSC Staff Nurse Exam – 17/12/2017

Ans : (*) Cystic fibrosis (CF) is a genetic disease that mostly affects the lungs and digestive system. It affects the cells that produce mucus, sweat and digestive juices. These secreted fluids are normally thin and slippery. People with cystic fibrosis have a higher than normal level of salt in their sweat; signs and symptoms are- wheezing, a persistent cough that produces thick mucus (sputum), repeated lung infections, inflamed nasal passages or a stuffy nose and recurrent sinusitis.

43. In human body glycogen is mainly stored in:

- (a) Thyroid gland
- (b) Kidney
- (c) Liver
- (d) Intestine

BHU Nursing Officer Exam (22/09/2019)

Ans : (c) In human body glycogen is made and stored primarily in the cells of the liver and skeletal muscle. In the liver glycogen can make up 5 - 6% of the organ's fresh weight and the liver of an adult weighing 1.5 kg, can store roughly 100 - 120 grams of glycogen.

44. "Avulsed teeth" should be placed in:

- (a) Normal saline
- (b) Cold water
- (c) Milk
- (d) Warm water

BHU Nursing Officer Exam (24/06/2018)

Ans : (c) Avulsed teeth are teeth which has been totally dislodge from the socket. Avulsion results in hypoxia and necrosis of the pulp of the tooth. Reimplantation is the main goal of emergency care, to preserve the periodontal ligament attached to the roots. It should be placed in milk and brought to the dentist for reimplantation.

45. The larynx is closed during swallowing by:

- (a) Epiglottis
- (b) Cricoid Cartilage
- (c) Vocal cord
- (d) Thyroid cartilage

RRB Staff Nurse Exam – 21/07/2019 (Shift-II)

Ans : (a) When you swallow, a flap called epiglottis moves to block the entrance of food particles into your larynx and lungs. They also tightly close during swallowing. That prevents food from entering your lungs.

46. Which one of the following is a function of the liver?

- (a) Synthesis of plasma protein
- (b) Elimination of carbohydrates
- (c) Concentration of bile
- (d) Secretion of cholecystokinin

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans : (a) The liver regulates most chemical levels in the blood and excretes a product called bile. This helps carry away waste products from the liver. The primary functions of liver are -

- Bile production and excretion.
- Excretion of bilirubin, cholesterol, hormone and drugs.
- Metabolism of fats, proteins, and carbohydrates.
- Enzyme activation.
- Plasma proteins synthesis, such as albumin, and clotting factors.
- Storage of glycogen, vitamins, and minerals.

47. Which one of the following is the last part of the small intestine?

- (a) Ileum
- (b) Jejunum
- (c) Duodenum
- (d) Appendix

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans : (a) The small intestine is divided into three parts such as-

- (i) Duodenum (first part)
- (ii) Jejunum (middle part)
- (iii) Ileum (last part)

48. The small intestine does NOT involve the:

- (a) Jejunum
- (b) Duodenum
- (c) Ileum
- (d) Cecur

DSSSB Staff Nursing–30/08/2019 (Shift-I)

Ans : (d) The small intestine (small bowel) is about 20 feet long and about an inch in diameter. It's job is to absorb most of the nutrients from what we eat and drink. Small intestine, which is divided into the duodenum, jejunum and ileum. Cecum is a pouch that forms the first part of the large intestine.

49. Which of the following is a manifestation of pyloric stenosis?

- (a) Projectile vomiting
- (b) Regurgitation
- (c) Steatorrhea
- (d) Tenesmus

– DSSSB Staff Nurse Exam. 2013

Ans. (a) : Projectile vomiting is a type of severe vomiting in which stomach contents can be force fully propelled several feet away from you. It usually comes in shorter more violent bursts than other type of vomiting. It is a manifestation of pyloric stenosis.

50. Distended abdomen and absence of bowel sounds after abdominal surgery indicates:

- (a) Intussusception (b) Paralytic Ileus
(c) Hemorrhage (d) Ruptured colon

DSSSB Staff Nurse - 2013

Ans : (b) After Abdomen surgery absence of bowel sounds and bloated abdomen indicates the condition of paralytic Ileus pitch sounds. Bowel sounds or abdomen sounds are caused by the normal position of the abdomen whereas paralytic ileus is a condition in which there is a decrease in bowel movements, due to many reasons such as gas liquid and open bowel wall (break open or rupture).

51. The right free border of lesser omentum contains all the following structures EXCEPT:

- (a) Bile duct (b) Portal vein
(c) Hepatic artery (d) Inferior vena cava

AIIMS Bhubaneswar Staff Nurse Exam-2018

Ans : (d) Bile duct, hepatic artery and portal vein are located in the short omentum. Inferior vena cava (lower vein) is a large vein, which carries deoxygenated blood from the lower body and takes it to the middle part of the right atrium of the heart. It's wall is rigid and valves are present so blood does not flow through gravity. It is not located in the small omentum.

52. A space called the _____ is found between the two pleural cavities.

- (a) Serosa (b) Mediastinum
(c) Parietal (d) Soleus

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (b) The space between the two pleural cavities is called mediastinum. The mediastinum is the central compartment of the thoracic cavity surrounded by loose connective tissue.

53. Intrinsic factor of castle is secreted by :

- (a) Parietal cells (b) Mucus cells
(c) B cells (d) Chief cells

AIIMS Nagpur Nursing Officer (28/02/2020)

Ans. (a) : Intrinsic factor is produced by the gastric parietal cell. It is essential for the absorption of vitamin B₁₂ from intestine. Absence of intrinsic leads to pernicious anemia.

54. Celiac disease also called Gluten Sensitive Entolpy/Enteropathy, affects which part of GI Tract?

- (a) Large Intestine (b) Small Intestine
(c) Duodenum (d) Stomach

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (b) Celiac disease also called Gluten sensitive Entolpy/Enteropathy, affects small intestine of GI Tract. Celiac disease or **gluten-sensitive enteropathy** is an immune reaction to eating **gluten**, a protein found in **wheat, barley and rye**. It damages the small intestine is lining and prevents it from absorbing some nutrients (malabsorption). Signs and symptoms may include- **fatigue, gas, constipation, diarrhea, weight loss, nusia and vomiting and abdominal pain.**

55. First pair of teeth to erupt in children is

- (a) Canines (b) Incisors
(c) Molars (d) Cuspids

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (b) First pair of teeth to erupt in children is Incisors. The first teeth to erupt are the lower and upper central incisors, which erupt between the ages of 6 to 12 months. The next to erupt are the lateral incisors between 9 to 16 month followed by the first molars from 13 to 19 months. Next the cuspids (canines) erupt from 16 to 23 month.

56. Which of the following teeth are used to crush and grind food-

- (a) canine (b) incisor
(c) molar (d) premolar

[RRB Staff Nurse Exam 2015]

Ans. (c) The human teeth function to mechanically break down of food by cutting and crushing them in preparation for swallowing and digesting. Humans have four types teeth incisors, canines, premolars and molars, which each have a specific function. The incisors cut the food, canines tear the food the premolar help in cutting the food down to still smaller bits and aid in chewing food and molar crush and grind food. Molar has a broad surface and are located in the farthest back part of mouth.

(ii) Blood Circulatory System

57. Normal pH of blood :

- (a) 7.0-7.1 (b) 7.2-7.4
(c) 7.3-7.5 (d) 7.6-7.8

AIMS Patna 2013 Exam

Kerala Staff Nurse (28/01/2016)

Kerala Staff Nurse (09/07/2021)

Mizoram PSC Staff Nurse May 2019

Ans. (c) : Blood is normally slightly basic, with a normal pH range of 7.35 to 7.45 Usually the body maintains the pH of blood close to 7.40.

Acidosis is when your blood pH drops below 7.35 and becomes too acidic.

Alkalosis is when your blood pH becomes higher than 7.45 i.e. too alkanine.

58. The pace maker of the heart :

- (a) AV node (b) SA node
(c) Bundle of his (d) Purkinje fibers

Kerala Staff Nurse (28/01/2016)

Kerala PSC staff Nurse (19/02/2016)

Ans. (b) : A pacemaker is a small device which is placed (implanted) in your chest to help control your heartbeat it's used to prevent your heart from beating too slowly. Implanting a pacemaker in your chest requires a surgical procedure. A pacemaker is also called a cardiac pacing device. The SA node is considered as the pace maker of heart as it generates electrical impulses and conducts them throughout muscle, stimulating heart to contract & pump blood.

59. How many days is the average life span of Red Blood cells?

- (a) 80 days (b) 100 days
(c) 120 days (d) 150 days

UPPSC Staff Nurse 03/10/2021
AIIMS Raipur Nursing Officer Main 2019
ESIC staff Nurse 2016 (01/03/2017)
Kerala staff Nurse (28/01/2016)

Ans. (c) : Erythrocytes are also known as red blood cells that deliver oxygen to and remove carbon dioxide from tissues. Red blood cells makeup of most half of your blood. The lifespan of a red blood cell is around 120 days.

White blood cells have a short life off 1 to 3 day's, your bone marrow is always making them.

60. The antibody that provides natural passive immunity in new born is :

- (a) IgA (b) IgD
(c) IgG (d) IgM

Kerala (PSC) Staff Nurse (30/01/2021)

Ans. (a) : IgA is an antibody that provides natural passive immunity in new born infant. The yellowish fluid colostrums secreted by mother during the initial day of lactation has abundant antibodies (IgA) protect the infant.

Naturally acquired passive immunity occurs during pregnancy, in which certain antibodies are passed from the maternal blood into the fetal bloodstream in the form of IgG.

- **IgD** functions as a B cell antigen receptor and may participate in B cell maturation, maintenance, activation and silencing.
- **IgM** is one of several isotypes of antibody that are produced by vertebrates. IgM is the largest antibody and it is the first antibody to appear in the response to initial exposure to an antigen.

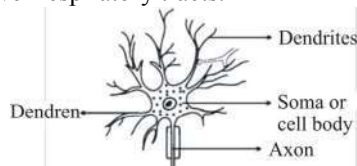
Note:- Antibodies are transferred from one person to another through natural means such as in prenatal and postnatal relationships between mother and child.

61. Voice box is another name for the:

- (a) Oesophagus (b) Pharynx
(c) Stomach (d) Larynx

DSSSB Staff Nursing-30/08/2019 (Shift-I)

Ans : (d) Larynx is also called voice box, a hollow, tubular structure connected to the top of the windpipe (trachea) air passes through the larynx on its way to the lungs. The larynx also produces vocal sounds and prevents the passage of food and other foreign particles into the lower respiratory tracts.



62. In which of the following cases does the erythroblastosis fetalis occur?

- (a) Mother is Rh+ve; fetus is Rh-ve
(b) Mother is Rh-ve; fetus is Rh+ve
(c) Both mother and fetus are Rh+ve
(d) Both mother and fetus are Rh-ve

DSSSB Staff Nursing-29/08/2019 (Shift-I)

Ans : (b) A case of erythroblastosis fetalis caused by isoimmunization of on Rh+ve type of mother by a type B baby is reported with confirmatory blood serologic findings. It is hemolytic anemia in the fetus (or neonate as erythroblastosis neonatorum) caused by transplacental transmission of maternal antibodies to fetal red blood cells.

63. Where do 'T' cell mature-

- (a) In thymus (b) In liver
(c) In spleen (d) In kidney

[AIIMS Nurse Exam 2016]

Ans. (a) A T - cells is a type of lymphocyte. They are called T cells and natural killer cells by the presence of a T - cell receptors on the cell surface. They mature in the thymus from thymocyte (although some also mature in the tonsils). It is one of the important white blood cells of the immune response.

64. Normal hydrostatic pressure at the arterial end of a capillary bed is ____ mm Hg.

- (a) 42 (b) 32
(c) 24 (d) 16
(e) 8

CGPSC Nursing Officer 2015

Ans. (b) : The patient's blood would flow more sluggishly from the arteriole into the capillary bed. Thus, the patient's capillary hydrostatic pressure would be below the normal 35 mm Hg at the arterial end.

65. Structures of portahepatis from posterior to anterior:

- (a) Portal vein, Hepatic duct, Hepatic artery
(b) Portal vein, Hepatic artery, Hepatic duct
(c) Hepatic duct, Portal vein, Hepatic artery
(d) Hepatic duct, Hepatic artery, Portal vein
(e) Hepatic artery, Portal vein, Hepatic duct

CGPSC Nursing Officer 2015

Ans. (b) : From posterior to anterior the portahepatis has the portal vein, the right and left hepatic arteries and the right and left hepatic ducts (i.e. vein, artery and duct).

66. Bohr effects is:

- (a) Binding of CO to hemoglobin displaces O₂
(b) Loading of O₂ to blood causes unloading of CO₂
(c) Loading of CO₂ to blood causes unloading of O₂
(d) Decrease in O₂ affinity of haemoglobin when pH of blood falls
(e) Associated with diffusion of Cl⁻ from plasma to red cells

CGPSC Nursing Officer 2015

Ans. (c) : The bohr effect describes hemoglobin's lower affinity for O₂ secondary to increase in the partial pressure of CO₂ or decreased blood pH. This lower affinity, in turn, enhances the unloading of O₂ into tissues to meet the O₂ demand of the tissue.

67. Which of these body systems is involved in the removal of carbon dioxide?

- (a) Respiratory system
(b) Digestive system

- (c) Urinary system
- (d) Reproductive system

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-III)

Ans : (a) Respiratory system is involved in the removal of carbon dioxide. **Respiratory system** consists of organs and structures that allows us to breathe by taking in oxygen and expelling carbon dioxide. The main parts include the lungs, nasal cavity, sinuses, blood vessels and various air passageways.

68. The following are the major blood vessels which supply liver except

- (a) Portal hepatic artery
- (b) Interlobular artery
- (c) Hepatic artery
- (d) Portal vein

Kerala (PSC) Staff Nurse (9/07/2021)

Ans. (a) : The liver is connected to two large blood vessels, the hepatic artery and the portal vein. The hepatic artery carries blood from the aorta to the liver, whereas the portal vein carries blood containing the digested nutrients from the entire gastrointestinal tract and also from the spleen and pancreas to the liver.

69. Excess bilirubin in the plasma causes:

- (a) Cyanosis
- (b) Jaundice
- (c) Cystic fibrosis
- (d) Leukaemia

DSSSB Staff Nursing-30/08/2019 (Shift-I)

Ans : (b) A high level of bilirubin in the blood is known as hyperbilirubinemia. High bilirubin levels can cause jaundice. Jaundice makes the skin and the whites of the eyes appear yellow, due to the brown and yellow bilirubin in the skin.

70. Identify an immunoglobulin present in milk, saliva and tears.

- (a) I_gG
- (b) I_gM
- (c) I_gA
- (d) I_gE

DSSSB Staff Nursing-28/08/2019 (Shift-II)

Ans. (c) : The I_gA dimeric form is the most prevalent and is also called secretory I_gA (SI_gA). SI_gA is the main immunoglobulin found in mucous secretions, including tears, saliva, sweat, colostrum and secretions from the genitourinary tract, gastrointestinal tract, prostate and respiratory epithelium. Immunoglobulin A is the major immunoglobulin in human colostrum and milk (Figure 1), however it is also present in milk of most other species. Colostrum and milk I_gA and I_gM are found in the form of secretory I_gA or SI_gA and SI_gM. Much of these are produced by plasma cells in the mammary tissue.

71. The anatomical closure of foramen ovale takes place :

- (a) About two months after birth
- (b) At seven months gestation
- (c) At nine months gestation
- (d) Immediately after birth

Kerala Staff Nurse (28/01/2016)

Ans. (a) : The foramen ovale normally closes as blood pressure rises in the left side of the heart after birth. The anatomical closure of foramen ovale takes place about two months after baby's birth. It causes due to result of change in the relative pressure of the tow atrial chamber.

72. Longest vein in the human body is :

- (a) Long saphenous vein
- (b) Inferior vena cava
- (c) Basalic vein
- (d) Cephalic vein

Kerala Staff Nurse (28/01/2016)

Ans. (a) : The Great Saphenous Vein (GSV) is the large superficial vein of the leg and the longest vein in the entire body. It can be found along the length of the lower limb, returning blood from the thigh calf and foot, to the deep femoral vein at the femoral triangle.

73. Potent vasopressor :

- (a) Serotonin
- (b) Angiotensin II
- (c) Nor-epinephrine
- (d) Epinephrine

Kerala Staff Nurse (28/01/2016)

Ans. (d) : Epinephrine with its potent vasopressor and inotropic properties can rapidly increase diastolic blood pressure to facilitate coronary perfusion and help restore organized myocardial contractility.

74. Regarding conducting system of the heart,

Identify the WRONG statement:-

- (a) SA node is the mass of specialized cells in the wall of right atrium/ SA node
- (b) AV is a mass of neuromuscular tissue situated in the wall of the atrial septum
- (c) AV node is the pacemaker of the heart
- (d) Bundle of His is a mass of specialized fibers that originate from the AV node

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-I)

Ans : (c) The cardiac conduction system is a group of specialized cardiac muscle cells in the walls of the heart that send signals to the heart muscle causing it to contract. The main components of the cardiac conduction system are the SA node, AV node, bundle of His, bundle branches and Purkinje fibers. It is also the pacemaker of heart.

→ The **sinoatrial (SA)** node is a collection of specialized cells (pacemaker cells) and is located in the upper wall of the right atrium, at the junction where the superior vena cava enters.

→ The **atrioventricular bundle** (bundle of his) is a continuation of the specialised tissue of the AV node and from the AV node to the purkinje fibers of the ventricle.

75. The pacemaker of the heart is characterized by

- (a) Arch of aorta
- (b) Bundle of his
- (c) AV node
- (d) SA node

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (d) The pacemaker of the heart is characterized by SA node. The sinoatrial node (SA node) is a specialized myocardial structure that initiates the electrical impulses to stimulate contraction and is found in the atrial wall at the junction of superior caval vein and the right atrium (Mikawa & Hurtado 2007). Heart beats 70-80 beats/minute.

76. The primary pacemaker in the mammalian heart is:

- (a) Purkinje fibres
- (b) Bundle of his
- (c) AV node
- (d) Sinoatrial node

NVS Staff Nursing-12/01/2018

Ans. (d) The primary pacemaker in the mammalian heart is sinoatrial node.

77. Normal bleeding time is :

- (a) 1-3 m
- (b) 3-6 mt
- (c) 6-10 mt
- (d) 10-12 mt

Kerala Staff Nurse (28/01/2016)

Ans. (*) : The normal bleeding time is between 2-7 minutes. The normal clotting time in a person is between 8-15 minutes. By understanding the time taken for blood to clot, it can be determined if the person has hemophilia or Von Willibrand's disease.

Note- (This question has been cancelled by Aayog.)

78. Hemoglobin is a coordination compound in which the central metal atom is :

- (a) Sodium
- (b) Magnesium
- (c) Manganese
- (d) Iron

Kerala PSC Staff Nurse (23/04/2015)

Ans. (d) : The hemoglobin is a component of the hemoglobin protein a metal complex with iron as the central metal atom, that can bind or release molecular oxygen.

Haemoglobin is a metal complex, the heme group of hemoglobin contains iron as the central metal atom. This heme group is responsible for the binding and release of the oxygen atoms.

79. Intermittent claudication is the typical feature of

- (a) Coronary Artery Disease
- (b) Peripheral Vascular Disease
- (c) Interstitial Lung Disease
- (d) Renal parenchymal Disease

Kerala PSC Staff Nurse (23/04/2015)

Ans. (b) : Claudication is pain in the legs or arms that comes on with walking or using the arms. This is caused by too little blood flow to your legs or arms. Claudication is usually a symptom of peripheral artery disease, in which the arteries that supply blood to your limbs are narrowed, usually because of atherosclerosis.

The most common types of claudication are -

Vascular claudication - This is usually a symptom of serious blood flow problems, especially peripheral artery disease.

Neurogenic claudication - This is caused by problem with your spine and nervous system.

80. The fluid that should be given to a congestive heart failure patient having bilateral +2 pitting edema on the lower extremities is :

- (a) Hypotonic
- (b) Hypertonic
- (c) Isotonic
- (d) Hypomeric

Mizoram PSC Staff Nurse May 2019

Ans. (a) Hypotonic : Which has a lower concentration of fluid, sugars and salt than blood.

Isotonic : Which has a similar concentration of fluid, sugars, and salt to blood.

Hypertonic : Which has a higher, concentration of fluid, sugars and salt than blood.

81. Normal fasting blood sugar level is :

- (a) 30 – 60 mg/dl
- (b) 70 – 110 mg/dl
- (c) 160 – 180 mg/dl
- (d) 180 – 210 mg/dl

Mizoram PSC Staff Nurse May 2019

Ans. (b) : Normal people have fasting sugar levels that generally run 70–110 mg/dl. A value above 126 mg/dl on at least two occasions typically means a person has diabetes.

82. Position to be used while giving enema is :

- (a) Prone position
- (b) Dorsal position
- (c) Supine position
- (d) Left lateral position

Mizoram PSC Staff Nurse May 2019

Ans. (d) : The left lateral position is the most appropriate position for giving an enema because of the anatomical characteristics of the colon.

83. The functions of pericardial fluid is to :

- (a) Lubricate the heart valves
- (b) Reduce friction between the pericardial membranes
- (c) Replace any blood that is lost
- (d) Provide O₂ and nutrients to the endocardium

Mizoram PSC Staff Nurse May 2019

Ans. (b) : Pericardial fluid helps reduce friction between the epicardial membranes of the heart, thereby, helping the membranes to glide over each heartbeat. It is found in the pericardium cavity by the serous layer of the pericardium.

84. Shock is best described as :

- (a) Loss of consciousness
- (b) Heart failure
- (c) Inadequate tissue perfusion
- (d) Aerobic metabolism

Mizoram PSC Staff Nurse May 2019

Ans. (c) : Shock can be defined as "acute circulatory failure with inadequate or inappropriately distributed tissue perfusion resulting in generalised cellular hypoxia". It is a life threatening medical emergency.

85. The number of pulse beats in a minute :

- (a) Rhythm
- (b) Volume
- (c) Tension
- (d) Rate

Kerala PSC Staff Nurse (19/02/2016)

Ans. (d) : A normal resting heart rate for adults ranges from 72-80 beats per minute. Generally a lower heart rate at rest implies more efficient heart function and better cardiovascular fitness. Heart rate varies depending on what you're doing - for example it will be slower if you're sleeping and faster if you're exercising.

86. The largest artery in the body :

- (a) Aorta
- (b) Pulmonary artery
- (c) Femoral artery
- (d) Cerebral artery

Kerala PSC Staff Nurse (19/02/2016)

Ans. (a) : Artery- The artery is part of the circulatory system along with the heart and other blood vessels. It is the blood vessel that transports oxygenated blood from the heart to other body parts. Arteries do not possess any valves and are thick.

Largest artery - The largest artery in our human body is the aorta. The main artery carries blood from the heart to the whole body.

Functions of Aorta—

- (1) It brings oxygenated blood from the ventricle to the whole body.
- (2) Any block age in the aorta can lead to problems with both heart activity and blood flow throughout the whole body.

87. The approximate volume of blood in a normal adult male is :

- (a) 10 Litres (b) 2 Litres
(c) 5 Litres (d) 8 Litres

AIIMS Bhopal Nursing Officer 23/05/2018 (Shift-I)

Ans. (c) : The amount of blood circulating within an individual depends on their size and weight, but the average human adults has nearly 5 liters of circulating blood but 70 kg healthy male have 5-5 to 6 litres blood. Women tend to have a lower blood volume than men. However, a woman's blood volume increases by roughly 50% during pregnancy.

88. Which of the following is NOT a clotting factor?

- (a) Calcium (b) Sodium
(c) Prothrombin (d) Fibrinogen

AIIMS Bhopal Nursing Officer 23/05/2018 (Shift-I)

Ans. (b) : Coagulation, also known as clotting, is the process by which blood changes from a liquid to a gel forming a blood clot.

Explanation clotting pathology test.

Factor	Name
I.	Fibrinogen
II.	Prothrombin
III.	Tissue factor or thromboplastin
IV.	Calcium

89. The normal ratio of Systolic, Diastolic and Pulse pressure is :

- (a) 1 : 2 : 3 (b) 2 : 3 : 4
(c) 4 : 3 : 2 (d) 3 : 2 : 1

AIIMS Bhopal Nursing Officer 23/05/2018 (Shift-I)

Ans. (d) : The top number (systolic) minus the bottom number (diastolic) is the pulse pressure.

• For example if the resting blood pressure is 120/80 millimeters of Mercury (mmHg), the pulse pressure is 40.

Systolic	diastolic	pulse pressure
120	80	40
3	2	1

90. The production of the first heart sound is because of which of the following?

- (a) Closure of semilunar valves
(b) Contraction of atrial musculature
(c) Rushing of blood into ventricle
(d) Closure of atrioventricular valves

AIIMS Bhopal Nursing Officer 23/05/2018 (Shift-I)

Ans. (d) : The first heart sound results from the closing of the mitral and tricuspid valves. The sound produced by the closure of the mitral valve is termed M1 and the sound produced by closure of the tricuspid valve is termed T1. Production of first heart sound is because of closure of atrioventricular valves.

91. Which among the following statements is correct regarding first heart sound?

- (a) Produced due to simultaneous closure of both the atrioventricular valves
(b) Produced due to the simultaneous closure of both Semilunar valves
(c) Appears between 'T' and 'P' waves of ECG
(d) Coincide with the 'T' wave in ECG

AIIMS Raipur Nursing Officer Main 2019

Ans. (a) : The first heart sound-lubb is created by the closure of atrioventricular valves at the beginning of ventricular systole and also it is more complex, louder and lasts longer than the second sound-dubb.

92. Identify the WRONG statement from the following :

- (a) Newborns have a rapid pulse rate
(b) Men have higher pulse than women
(c) Exercises increases the pulse rate
(d) Ingestion of meal causes slight increase in pulse rate

AIIMS Raipur Staff Nurse 2017 (Shift-II)

Ans. (b) : The average adult male heart rate is between 70 and 72 beats per minute, while the average for adult women is between 78 and 82 beats. This difference is largely accounted for by the size of the heart, which is typically smaller in females than males.

93. The artery that supply blood to the diaphragm is called:-

- (a) Inferior mesenteric artery
(b) Suprarenal arteries
(c) Inferior phrenic arteries
(d) Celiac arteries

AIIMS Raipur Staff Nurse 2017 (Shift-I)

Ans. (c) : The inferior phrenic arteries supply blood to the diaphragm. They arise either from the aorta or from the celiac artery. The superior phrenic arteries arise from the lower part of the thoracic aorta. They join with musculophrenic and pericardial phrenic arteries.

- The inferior mesenteric artery supplies blood to the distal one-third of the transverse colon, descending colon and proximal two-thirds of rectum.
- The suprarenal arteries supply blood to the adrenal gland.
- The celiac artery supplies blood to the liver, stomach, abdominal esophagus, spleen and the superior half of both, the duodenum and the pancreas.

94. Which of the following is not required to clot formation?

- (a) Vitamin-K (b) Calcium
(c) Plasmin (d) Fibrinogen

CCRS Staff Nurse (28/05/2017)

Ans. (c) : Blood clotting is the process by which blood changes from liquid to get and stop bleeding when the blood vessels get injured. Platelets in blood produces prothrombin in the presence of Vitamin-K. The prothrombin then converts into the thrombin (active form) in the presence of thrombokinase and calcium ions. This thrombin then converts fibrinogen (inactive) into the fibrin (Active). Fibrin thread then plugs the damaged part and appear like a clot.

95. **Humoral immunity is mediated by :**
 (a) Natural Killer Cells (b) T lymphocytes
 (c) B lymphocytes (d) Suppressor T Cells
CCRAS Staff Nurse (18/12/2019)

Ans. (c) : The primary cell responsible for generating humoral immunity is the B lymphocyte. B lymphocytes comprise 1 to 10% of the lung lymphocyte Population and can be separated into two main classes. Plasma Cells constitutively secrete IgG and other immunoglobulin sub classes.

96. **In an ECG the cause for T wave is :**
 (a) Ventricular depolarization
 (b) Atrial depolarization
 (c) Atrial repolarization
 (d) Ventricular repolarization
CCRAS Staff Nurse (18/12/2019)

Ans. (d) : Normally, the T wave is formed at the end of the last phase of ventricular repolarization. Ventricular repolarization is the process by which the ventricular myocytes return to their negative resting potential so that they can depolarize again.

97. **'Sinoatrial Node' is located in which part of the heart**
 (a) Left atrium (b) Right atrium
 (c) Left ventricle (d) Right ventricle
RPSC Staff Nurse 2007

Ans. (b) : The 'Sinoatrial Node' (SA) is the heart's natural pacemaker. The SA node consists of a cluster of cells that are situated in the upper part of the wall of the right atrium (the right upper chamber of the heart). The electrical impulses are generated there. The SA node is also called the sinus node.

98. **Blood group was first discovered by**
 (a) Robert Koch
 (b) Paul Ehrlich
 (c) Anton Von Leeuwenhock
 (d) Karl Landsteiner
RPSC Staff Nurse 2007

Ans. (d) : Blood group was first discovered by Karl Landsteiner, an Austrian scientist. He discovered three human blood groups. These were the A, B, and O blood groups. For this discovery he was awarded the Nobel Prize for Medicine in 1930.

99. **Normal Platelets count in human being is**
 (a) 4-6 lac (b) 1-4 lac
 (c) 50-80 Thousands (d) 25-50 Thousands
RPSC Staff Nurse 2007

Ans. (b) : A normal platelet count ranges from 150,000 to 450,000 platelets per microliter of blood. Having more than 450,000 platelets is a condition called thrombocytosis, having less than 150,000 is known as thrombocytopenia. You get your platelet number from a routine blood test called a Complete Blood Count (CBC).

100. **What is the shape of the lymph nodes?**
 (a) Tubular (b) Circular
 (c) Cuboidal (d) Kidney or Oval shaped
Gujarat (COH) Staff Nurse (20/06/2021)

Ans. (d) : A normal lymph node is kidney shaped or oval in shape, hypoechoic to the adjacent muscle and frequently contains an echogenic fatty hilum. Lymph nodes are small glands that filter lymph. They are present throughout the body and contain immune cells that can help fight infection by attacking and destroying germs that are carried in through the lymph fluid.

101. **Normal serum sodium level is**
 (a) 145-155 mEq/L (b) 135-145 mEq/L
 (c) 3.5 to 5.2 mEq/L (d) 9 to 11 mEq/L
Gujarat (COH) Staff Nurse (20/06/2021)

Ans. (b) : Normal serum sodium level are usually between 135 and 145 milliequivalent per litre (mEq/L). Blood sodium level below 135 mEq/L mean low blood sodium (Hyponatremia). Blood sodium level greater than 145 mEq/L means high blood sodium level (Hyper natremia).

102. **"Universal Recipient" blood group is**
 (a) O group (b) AB group
 (c) A group (d) B group
**[AIIMS Patna Exam 2013]
 Gujarat (COH) Staff Nurse (20/06/2021)**

Ans. (b) : AB positive blood type is known as the "Universal recipient" because AB positive patients can receive red blood cell from all blood types. The "universal donor" blood type is O negative. AB type blood has no antibodies against type A or type B blood, so a person with AB blood can receive any type blood without the risk of adverse effects.

103. **Universal recipient for blood is**
 (a) O^{+ve} (b) O^{-ve}
 (c) AB^{+ve} (d) AB^{-ve}
AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans. (c) See the explanation of above question.

104. **Person of which blood group is known as universal donor?**
 (a) A (b) B
 (c) AB (d) O
UPPSC Staff Nurse 03/10/2021

Ans. (d) : Type 'O' Blood group does not have any antigens. It is called the "Universal Donor" because it is compatible with any blood type.

105. **The normal Serum Potassium level is**
 (a) 2 - 3 mEq/L (b) 2.3 - 3.1 mEq/L
 (c) 3.5 - 5 mEq/L (d) 5.1 - 7.4 mEq/L
Gujarat (COH) Staff Nurse (20/06/2021)

Ans. (c) : The normal serum potassium level are as follows :
 For Adult- 3.5 – 5.0 mEq/L
 For Child- 3.4 – 4.7 mEq/L
 For Infant- 4.1 – 5.3 mEq/L
 For newborn- 3.9 – 5.9 mEq/L

106. **The normal mean pulmonary artery pressure is :**
 (a) 10-15 mmHg (b) 15-20 mmHg
 (c) 20-25 mmHg (d) 25-30 mmHg
HPSSC Staff Nurse (05/08/2021)

Ans. (b) : The normal pulmonary artery systolic pressure is 20 mmHg or less and the normal mean (average) pulmonary artery pressure is 12 mmHg. At present, the haemodynamic definition of pulmonary hypertension (PH) is an mPAP \geq 25 mmHg at rest when measured invasively by Right Heart Catheterisation (RHC).

- Normal mPAP at rest is 14 ± 3 mmHg with an upper normal limit of approximately 20 mmHg.
- Mild pulmonary hypertension is generally in the 25-40 range, moderate is in the 41-55 range, and severe is the greater than 55 range.

107. Which of the following biophysiological tests is an example of in vivo data?

- (a) Blood glucose (b) Bacterial count
(c) Blood pressure (d) Bone marrow biopsy

DSSSB Staff Nursing–29/08/2019 (Shift-I)

Ans : (c) Blood pressure a bio physiological test is example of in vivo data, and expressed as a measurement with two numbers, with one member on top (systolic) and one on the bottom (diastolic), like a fraction for example, 120/80 mm Hg. The top number refers to the amount of pressure in your arteries during the contraction of heart muscle.

108. Cor pulmonale can be described as the enlargement of:

- (a) right ventricle of the heart
(b) left atrium of the heart
(c) right atrium of the heart
(d) left ventricle of the heart

DSSSB Staff Nursing–29/08/2019 (Shift-I)

Ans : (a) Pulmonary heart disease also known as Cor pulmonale, is the enlargement and failure of the right ventricle of the heart as a response increased vascular resistance (such as from pulmonic stenosis) or high blood pressure in the lungs.

Symptoms-

- Fainting spells during activity
- Chest discomfort usually in the front of the chest
- Chest pain
- Swelling of the feet or ankles.
- Bluish lips and fingers (cyanosis)

109. Identify the type of hypersensitivity in hemolytic anemia

- (a) Anaphylactic (b) Delayed
(c) Cytotoxic (d) Immune Complex

DSSSB Staff Nursing–28/08/2019 (Shift-III)

Ans. (c) : Cytotoxic (type II) type of hypersensitivity in hemolytic anemia. Type II hypersensitivity reaction refers to an antibody mediated immune reaction in which antibodies (Ig G or IgM) are directed against cellular or extracellular matrix antigens with the resultant cellular destruction, functional loss, or damage to tissues. Damage can be accomplished via three mechanisms-

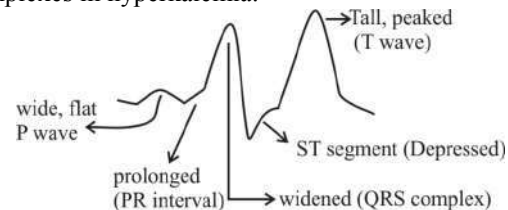
- Antibody binding to cell surface receptors and altering its activities.
- Activation of the complement pathway.
- Antibody dependant cellular cytotoxicity

110. Choose the correct statement regarding ECG changes in hyperkalemia.

- (a) Peak 'P' wave, 'ST' depression. shallow 'T' wave and prominent 'U' wave
(b) Flat 'P' wave, Prolonged 'PR' interval, widened 'QRS complex' and tall 'T' wave
(c) Normal 'P' wave and 'QRS complex'. rounded 'T' wave and shallow 'U' wave
(d) Peak 'P' wave, absent 'QRS complex' and prominent 'U' wave

DSSSB Staff Nursing–28/08/2019 (Shift-III)

Ans. (b) : Early changes of hyperkalemia include tall, peaked T waves with a narrow base best seen in pre-radial leads: shortened QT interval and ST-segment depression. These changes are typically seen at a serum potassium level of 5.5 – 6.5 meq/L widened QRS complexes in hyperkalemia.



111. Which one the following is an example of a chromoprotein ?

- (a) Hemoglobin (b) Mucin
(c) Glutenin (d) Casein

DSSSB Staff Nursing–28/08/2019 (Shift-III)

Ans. (a) : Chromoproteins are conjugate proteins for examples chromoproteins include flavoproteins (with FMN or FAD) hemoglobin and cytochromes with iron, rhodopsin with vitamin A hemocyanin and cytochrome oxidase with copper, chloroplastins with chlorophyll. A common example is hemoglobin, which contains a heme cofactor which is the iron-containing molecule that makes oxygenated blood appeared.

112. What is immunoglobulin that is advanced in individuals with allergies (acute reaction)?

- (a) Immunoglobulin- M (b) Immunoglobulin- E
(c) Immunoglobulin- A (d) Immunoglobulin- D

DSSSB Staff Nursing–28/08/2019 (Shift-III)

Ans. (b) : Immunoglobulin E (IgE) are antibodies produced by the immune system. It plays central role in acute allergic reaction and chronic inflammatory allergic disease. The development of a drug able to neutralize this antibody represents a breakthrough in the treatment of inflammatory pathogens with a probable allergic basis.

113. Who described 'ABO' blood grouping?

- (a) Karl Landsteiner (b) Sir Ronald Ross
(c) Robert Koch (d) David Baltimore

DSSSB Staff Nursing–28/08/2019 (Shift-I)

Ans : (a) Karl Landsteiner discovered the ABO blood group system by mixing the red cells and serum of each of his staff. There are four blood group-

- Type O blood
- Type B blood
- Type A blood
- Type AB blood.

114. Which diagnostic test determines the presence of Hodgkin's lymphoma?

- (a) Presence of Philadelphia chromosome
- (b) Presence of lymphoblasts in the bone marrow
- (c) Presence of malignant cells in CSF
- (d) Presence of Reed-Sternberg cell in lymph node

DSSSB Staff Nursing-28/08/2019 (Shift-I)

Ans : (d) Reed-Sternberg (R-S) cells are essential to the diagnosis of Hodgkin lymphoma. The presence of R-S cells is necessary but as R-S cells are not unique to HD, R-S cells alone are not sufficient for the diagnosis. The Reed-Sternberg cell is a lymphoid cell and in most cases, is a B cell and clonal.

115. The congenital heart disease in which radiographic findings depict boot-shaped heart is called:

- (a) Patent Ductus Arteriosus
- (b) Atrial Septal Defect
- (c) Coarctation of Aorta
- (d) Tetralogy of Fallot

DSSSB Staff Nursing-28/08/2019 (Shift-I)

Ans. : (d) Tetralogy of fallot accounts for 10 % - 11% of cases of congenital heart disease. On chest radiographs the heart has the shape of a wooden shoe or boot. It describes the appearances of an upturned cardiac apex due to right ventricular hypertrophy and a concave pulmonary arterial segment.

116. The heteropolysaccharide that acts as a lubricant and shock absorber in joints is:

- (a) Hyaluronic acid
- (b) Heparin
- (c) Cellulose
- (d) Glycogen

DSSSB Staff Nursing-28/08/2019 (Shift-I)

Ans : (a) The most important heteropolysaccharides are found in the connective tissues of all animals and includes molecules. Hyaluronic acid has D-glucuronic acid and N-acetyl - D - glucosamine component sugars functions lubricant, shock absorber, water binding.

117. What is pectus excavatum deformity of chest?

- (a) Narrowing of transverse diameter and depressed sternum
- (b) Ratio of anterior-posterior diameter to transverse diameter is 1:1
- (c) Depressed sternum and narrowing of anterior-posterior diameter
- (d) Protruding of sternum and an increased anterior-posterior diameter

DSSSB Staff Nursing-28/08/2019 (Shift-I)

Ans : (c) Pectus excavatum is a condition in which a person's breastbone is sunken into his or her chest. Severe cases of pectus excavatum can eventually interfere with the function of the heart and lungs. Pectus excavatum is a congenital deformity of the chest wall that causes several ribs and the breastbone (sternum) to grow in an inward direction.

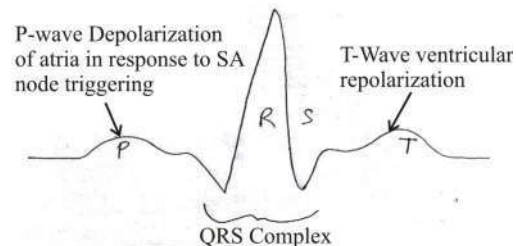
118. What will be the diagnosis if a nurse evaluates the ECG and sees a breath toothed P wave?

- (a) Atrial Flutter
- (b) Premature Junction Complarity
- (c) Atrial fibrillation

(d) Sinus Arrhythmia.

DSSSB Staff Nurse – 27/08/2019 (Shift-III)

Ans. (a) : ECG in atrial flutter shows regular flutter waves (F-waves not to be confused with F-waves seen in atrial fibrillation) which gives the baseline a saw-tooth appearance. Atrial flutter is the only diagnosis causing this baseline appearance which is why it must be recognized on the ECG



119. Inadequate pumping action of the heart is known as _____.

- (a) Obstructive shock
- (b) Septic shock
- (c) Anaphylactic shock
- (d) Cardiogenic shock

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (d) Inadequate pumping action of the heart is known as cardiogenic shock. It is a life-threatening condition where heart suddenly stops pumping enough oxygen-rich blood to the body. It is an emergency situated that is usually brought on by a heart attack. The heart is a muscular organ, the human heart works during the lifetime of a person and pumps about 200 million approximately 2.5 billion times during a human lifetime.

120. What is an example of natural lethal cells?

- (a) Hypersensitivity
- (b) Innate immunity
- (c) Acquired immunity
- (d) Auto immunity

NVS Staff Nursing-12/01/2018

Ans : (b) The innate immune responses are the first line of defense against invading pathogens. It's responses rely on the body's ability to recognize conserved features of pathogens that are not present in the uninfected host. Natural killer cells of WBCs are, leukocytes, mast cells, eosinophils, basophiles and other bacterial cells from the immune system of our body.

121. The amount of blood pumped out by each ventricle per minute is called:

- (a) Ejection fraction
- (b) End diastolic volume
- (c) Stroke volume
- (d) Cardiac output

NVS Staff Nursing-12/01/2018

Ans : (d) The amount of blood pumped out by each ventricle per minute is called cardiac output.

[Cardiac output = stroke volume × heart rate]

The normal range for cardiac output is about 4 to 8 litre/min but it can vary depending on the body's metabolic needs.

The heart pumps blood through the network of arteries and veins called the cardiovascular system.

Ejection Fraction (EF) refers to how well your left ventricle (or right ventricle) pumps blood with each heart beat.

122. The naturally-occurring anticoagulant in blood is:

- (a) Plasminogen (b) Heparin
(c) Fibrinogen (d) Thrombin

NVS Staff Nursing-12/01/2018

Ans : (b) Plasminogen is the inactive precursor of plasmin, a potent serine protease involved in the dissolution of fibrin blood clots. Fibrinogen is a protein produced by the liver. This protein helps stop bleeding by helping blood clots to form.

Thrombin is a coagulation factor used to stop bleeding during surgery. Once converted from prothrombin, thrombin converts fibrinogen to fibrin which in combination with platelets from the blood forms a clot.

Heparin is a naturally occurring anticoagulant (blood thinner) in the blood that prevents the formation of blood clots caused by certain medical conditions or medical procedures. It is also used before surgery to reduce the risk of blood clots.

123. Hematologic abnormalities include.

- (a) Anemia (b) Nephritis
(c) Hematuria (d) Polyuria

CRPF Staff Nurse 2014

Ans : (a) Hematologic disorders involve the blood and include problems with red blood cells, white blood cells, platelets, bone marrow, lymph nodes, and spleen. Children can experience a variety of disorders, some are genetic while others are acquired.

124. Hematology is the study of-

- (a) Bones (b) Blood heart
(c) Heart (d) Kidney

[ESIC Nursing orderly Shift- II - 2016]

Ans. (b) Hematology is the study of blood and its components such as blood cells, hemoglobin, blood proteins, bone marrow, platelets, spleen blood vessels and the mechanism of protein.

125. The function of blood is-

- (a) To carry carbon dioxide for blood
(b) To carry nutrients to all parts of the body
(c) Taking antibodies for the places of infection
(d) All of the other options

[ESIC Nursing orderly Shift- II - 2016]

Ans. (d) Blood is the red liquid that circulates in the arteries and veins of humans and other vertebrates animals carrying oxygen to and carbon dioxide from the tissues of the body. Blood has many different functions including transporting oxygen and nutrient to the lungs & tissues bringing waste products to the kidneys & liver which filter the blood and red blood cell RBC=or erythrocytes

126. What is the normal systolic blood pressure in a 20 years old adult-

- (a) 100 mm Hg (b) 120 mm Hg
(c) 140 mm Hg (d) 160 mm Hg

[ESIC Staff Nurse Exam March I - 2016]

Ans. (b) The normal systolic blood pressure in 20 years old adult is 120 mmHg. **Blood pressure (BP)** is the pressure of circulating blood against the walls of blood vessels. Most of this pressure results from the heart pumping blood through the circulatory system. Systolic blood pressure is the force the heart exerts on the walls of the arteries each time it beats can be measured the force that heart exerts on the walls of the arteries in between beats.

127. What help the heart to pump blood to all parts of the body?

- (a) Relaxation (b) Contraction
(c) Ejaculation (d) Expansion

UPNHM Staff Nurse -24/01/2021 (Shift-II)

Ans. (b) Contraction help the heart to pump blood to all parts of the body. The heart is the main part of the blood circulatory system which carries blood to different parts of the body. When the heart is in the systolic state, blood flows from the heart to different parts of the body through the arteries. Whereas, when the heart is in the diastolic state, then the blood enters the heart through the veins.

128. Which plasma protein maintains the bloods oncotic pressure-

- (a) Globulin (b) Fibrinogen
(c) Albumin (d) Prothrombin

[ESIC Staff Nurse Exam March I - 2016]

Ans. (c) Albumin plasma protein maintains the bloods osmotic pressure. Albumin is a globular protein made by the liver. It makes up 40 to 60% of total proteins in the blood and plays many role. It is a transport protein that bind to various ligands and carry them around.

129. Which is the plasma proteins that constitutes about 40 to 60% of total plasma proteins?

- (a) Fibrinogen (b) Globulin
(c) Albumin (d) Fibrin

RRB Staff Nurse Exam - 20/07/2019 (Shift-II)

Ans : (c) Albumin (69 KDa) is the major protein in human plasma (3.4-4.7 g/dl). It makes up approximately 60% of the total plasma protein. About 40% of albumin is present in the plasma, and the other 60% is present in the extracellular space. Albumin, globulins and fibrinogen are the major plasma proteins.

130. Hepatic blood secretion is-

- (a) Prothrombin (b) Thrombin
(c) Heparin (d) All the above

[ESIC Staff Nurse Exam II - 2016]

Ans. (c) Hepatic (Liver) blood secretion is heparin. It is an anticoagulant (blood thinner) that prevents the formation of blood clots and extension of existing clots within the blood. It allow the blood body's natural clot lysis mechanisms to work normally to break down clots that have formed.

131. Normal diameter of RBC is-

- (a) 6 to 7 μm (b) 7 to 8 μm
(c) 8 to 9 μm (d) 9 to 10 μm

[ESIC Staff Nurse Exam March II - 2016]

Ans. (b) Normal diameter of RBC is 7-8 μm .

132. Place where RBC is made-

- (a) Liver (b) Blood
(c) Testis (d) Red bone marrow

[ESIC Staff Nurse Exam II - 2016]

Ans. (d) Red blood cells are formed in the red bone marrow of bones. Stem cells in bone marrow are called hemocytoblasts. They give rise to all of the formed elements of blood. Bone marrow occurs in two forms- red bone marrow hematopoitically active & yellow marrow inactive. Red Blood cell (RBC) or erythrocytes are the most abundant cell in the blood other than i.e. plasma, white blood cell and platelets. The primary function of RBCs is to transport oxygen to body cells and deliver carbon dioxide to the lungs.

133. Which of the following ions helps in formation of blood clot-

- (a) Calcium ion
- (b) Manganese
- (c) Potassium ion
- (d) Phosphate

[RRB Staff Nurse Exam 2015]

Ans. (a) Calcium ion helps in formation of blood clot. Ionized calcium participates in the firing of muscle and nerve cells promotes blood clotting and prevents the depletion of bone mass. Muscle nerve and hurt cells use this "**calcium voltage**" for concentration and neural transmission. Activation of platelets triggers a multistep "**cascade**" that produces a "**thrombus**" or clot.

134. The innermost layer of the heart is called:

- (a) Myocardium
- (b) Visceral pericardium
- (c) Endocardium
- (d) Pericardium

[RRB Staff Nurse Exam – 21/07/2019 (Shift-II)]

Ans : (c) The innermost layer of the heart is called Endocardium.

135. The P wave of the electrocardiogram corresponds to-

- (a) Atrial depolarization
- (b) Atrial repolarization
- (c) Ventricular depolarization
- (d) Ventricular repolarization

[RRB Staff Nurse Exam 2015]

Ans. (a) The P wave of the electrocardiogram (ECG) responds to atrial depolarization. This wave causes the muscle to squeeze and pump blood from the heart. A normal heartbeat on ECG will show the timing of the top and lower chambers. The right and left atria or upper chambers make the first wave called a P wave following a flat line when the electrical impulse goes to the bottom chambers.

136. Blood transport system is-

- (a) Endocrine system
- (b) Integumentary system
- (c) Cardio-vascular system
- (d) Urinary system

[RML Staff Nurse Exam 2012]

Ans. (c) Cardio-vascular system or circulatory system is an organ system that permits blood to circulate & transport nutrients (such as amino acids and electrolytes) hormones, oxygen carbon dioxide and blood cells to and from the cells in the body to provide nourishment and help in fighting diseases, stabilize temperature and P^H and maintain homeostasis.

137. Entering in the tissue plasma is called-

- (a) Interstitial fluid
- (b) Blood
- (c) Lymph
- (d) Capillary fluid

[RML Staff Nurse Exam 2012]

Ans. (c) Lymph is a colourless fluid containing white blood cells, which bathes the tissues and drains through the lymphatic system into the bloodstream. It maintains fluid balance and removes bacteria from tissues. Lymph are **lymphocytes and macrophages**, the primary cells of the immune system.

138. A.V. Node is located at-

- (a) In right atrium
- (b) In atrio ventricular system
- (c) In Pericardium
- (d) In myocardium

[RML Staff Nurse Exam 2012]

Ans. (a) AV (atrioventricular) node is the groups of cells located in the border between the right atrium and the right ventricle which serves as the secondary contractile system of the heart. It is primarily induced by SA node. It is **heart's electrical system**, controlling the transmission of the heart's electrical impulse from the atria to the ventricles.

139. What is electrocardiogram-

- (a) Recording of brain wave activity
- (b) Cardiac activity recording
- (c) Recording of peristalsis speed
- (d) None of the above

[ESIC Staff Nurse Exam Delhi 2012]

Ans. (b) An electrocardiogram (ECG) records the electrical signals in the heart. It's a common test used to detect heart problems and monitor the heart's status in many situations.

140. Normal intraocular pressure is-

- (a) 8–21mm Hg
- (b) 16–25mm Hg
- (c) 20–35mm Hg
- (d) 19–38mm Hg

[DSSSB Staff Nurse Exam 2013]

Ans. (a) Normal intraocular pressures average between 10-21 mmHg. Eye Pressure can vary hourly daily and weekly. Normal eye pressure ranges from 10-21 mm Hg. Ocular hypertension is an eye pressure of greater than 21 mm Hg.

141. Apical pulse is measured by placing the diaphragm of the stethoscope at-

- (a) Aortic region
- (b) Pulmonary region
- (c) Mitral region
- (d) Tricuspid region

[DSSSB Staff Nurse]

Ans. (c) Apical pulse is measured by placing the diaphragm of the stethoscope at mitral region. Mitral valve area by planimetry on echocardiogram. The area circumference is traced out with the digital caliper of the echocardiograph and machine displays the mitral valve area.

142. ECG changes in myocardial infarction is -

- (a) Rise in ST section
- (b) Broad QRS complex
- (c) Presence of V wave
- (d) Long PR interval

[DSSSB Staff Nurse Exam 2013]

Ans. (a) ECG changes in myocardial infarction is rise in **ST section**. Myocardial infarction is a disease caused by reduced blood flow in a coronary artery due to atherosclerosis and occlusion of an artery by an embolus or thrombus. The **ST section** is the flat, **isoelectric section of the ECG** between the end of the S wave (the joint) and the beginning of the T wave. The ST segment represent the interval between ventricular depolarization and repolarization.

143. What is the function of parathormone in the body-

- (a) Increase the level of Na in blood
- (b) Decrease the level of Na in blood
- (c) Increase the level of Ca in blood
- (d) Decrease the level of Ca in blood

[AIIMS Patna Exam 2013]

Ans. (c) Parathormone is a hormone that is made by the parathyroid glands and is critical to maintaining calcium and phosphorus balance. Deficiency of parathormone results in abnormally low calcium in the blood (hypocalcemia). Excessive parathormone leads to elevated calcium levels in the blood and calcium deposition in cartilage.

144. The difference between systolic pressure and diastolic pressure is

- (a) Blood pressure
- (b) Pulse pressure
- (c) Apical pressure
- (d) Lateral pressure

RPSC Nursing Tutor Exam- 2009

RRB Staff Nurse Exam – 20/07/2019 (Shift-III)

Ans : (b) The difference between systolic pressure and diastolic pressure is pulse pressure. The systolic pressure is specifically the maximum arterial pressure during contraction of the left ventricle of the heart. The diastolic blood pressure is the pressure the blood exerts within the arteries in between heartbeats. The diastolic pressure is below 120.

145. Full form of CPR is :

- (a) Cardio Pulmonary Resuscitation
- (b) Cardio Pulmonary Relapse
- (c) Cardio Pulmonary Restriction
- (d) Chronic Pulmonary Relapse

RPSC Staff Nurse Grade-II - 2010

Ans : (a) Full form of CPR is Cardio Pulmonary Resuscitation. CPR is an emergency procedure that combines chest compressions often with artificial ventilation in an effort to manually preserve intact brain function until further measures are taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest.

146. The artery which supply blood to head and neck is

- (a) Coronary artery
- (b) Carotid artery
- (c) Mesenteric artery
- (d) Intracostal artery

RPSC Staff Nurse Grade-II - 2010

Ans : (b) In anatomy, the left and right common arteries (carotids) are arteries that supply the head and neck with oxygenated blood, they divide in the external and internal carotid arteries.

147. A largest organ in abdominal cavity that filters blood is :

- (a) Lymph nodes
- (b) Palatine Tonsils
- (c) Spleen
- (d) Thymus gland

Ram Manohar Lohiya Hospital Staff Nurse-2011

Ans : (c) A largest organ in abdominal cavity that filters blood is spleen. It is an organ that is located in the upper-left part of the abdomen, that produces lymphocytes which are important elements in the immune system. One major function is that this organ filters blood, removing foreign bodies, microbes & faulty red blood cells (RMCs) in its redpulp.

148. The most common type of Leukaemia in adult is :

- (a) Acute myelocytic leukemia
- (b) Acute Lymphocytic leukemia
- (c) Chronic Lymphocytic leukemia
- (d) Chronic Myelocytic leukemia

Ram Manohar Lohiya Hospital Staff Nurse-2011

Ans : (b) The most common type of leukemia in adult is Acute Lymphocytic Leukemia (ALL). It is a type of blood cancer that starts in white blood cells in your bone marrow, the soft part of the bones. It develops from immature lymphocytes, a kind of white blood cell that's key to the immune system.

149. A cardiac cycle takes time to complete-

- (a) 0.1 second
- (b) 0.3 second
- (c) 0.6 second
- (d) 0.8 second

RRB Staff Nurse Grade-II - 2012

Ans : (d) A cardiac cycle takes times to complete 0.8 seconds. It is the sequence of the events that occurs when the heart beats. As the heart beats, it circulates blood through pulmonary and systemic circuits of the body. It is the performance of human heart from beginning of one heartbeat to the beginning of next.

150. How many second is the normal duration of a cardiac cycle?

- (a) 0.6 seconds
- (b) 0.10 seconds
- (c) 0.4 seconds
- (d) 0.8 seconds

RRB Staff Nurse Exam – 20/07/2019 (Shift-III)

Ans. (d) See the explanation of above question.

151. Chamber in the human heart is-

- (a) One atrium and one ventricle
- (b) One atrium and two ventricle
- (c) Two atrium and two ventricle
- (d) Two atrium and one ventricle

RRB Staff Nurse Grade-II - 2012

Ans : (c) The heart is a muscular organ in most animals which pumps blood through the blood through the blood vessels of the circulatory system. A normal heart has two upper (receiving) and two lower pumping chambers. The upper chambers the **right and left atria**, receive incoming blood. The lower chambers the more **muscular right & left ventricles** pump blood out of the heart.

152. Portal circulation is related to-

- (a) Brain
- (b) Heart
- (c) Lungs
- (d) Liver

RRB Staff Nurse Grade-II - 2012

Ans : (d) Portal circulation is related to liver. A portal circulation are connecting veins, which are an additional network of vessels between arterial and venous circulation. The veins between the connected capillaries are called portal veins. Blood flow from the abdominal organs that passes through the portal vein, the sinusoid of the liver. It is a portal system between the hypothalamus and the anterior pituitary gland.

153. Pulmonary embolism is caused by:

- (a) Clots
- (b) Fat molecules
- (c) Air bubbles
- (d) All

JHMCS Jhalawar Staff Nurse Exam

Ans : (d) Pulmonary embolism is caused by blood clots, fat molecules and air bubbles. It is blockage in one of the pulmonary arteries in the lungs. In most cases, pulmonary embolism is caused by blood clots that travels to the lungs from the legs or rarely other parts of the body (deep vein thrombosis). Because the clots block blood flow to the lungs, pulmonary embolism can be life-threatening.

154. The smallest vessels of a vein is called:

- (a) Capillaries (b) Vena Cava
(c) Venules (d) Sinus

JHMCS Jhalawar Staff Nurse Exam

Ans : (c) Venules is a blood vessel that allow deoxygenated blood to return from the capillary beds to the larger blood vessels called veins. A venule is a very small blood vessel in the microcirculation. Venules range from 7 mm to 1 mm of total bloods volume, 25% of which is contained in the venules. Many venules unite to form a vein.

155. Which artery supplies oxygenated blood to the stomach?

- (a) Carotid artery (b) Gastric artery
(c) Celiac artery (d) Cephalic artery

NVS Staff Nursing-19/09/2019

RRB Staff Nurse-2015 (08-02-2015)

Ans : (c) The celiac artery also known as celiac axis or celiac trunk or truncus coeliacus, is the first branch of the abdominal aorta. It is about 1.25 cm in length. It is a visceral artery in the abdominal cavity supplying the foregut. It arises from the abdominal aorta and commonly gives rise to 3 branches-left gastric artery, splenic artery and common hepatic artery.

156. Normal GFR (Glomerular Filtration Rate) in adult is

- (a) 50 ml/minute (b) 100 ml/minute
(c) 150 ml/minute (d) 200 ml/minute

DSSSB Staff Nurse Exam-2017 (Shift-II)

Ans : (b) Normal GFR (Glomerular Filtration Rate) in adult is 100 ml/min. Older people have lower than normal GFR levels, because GFR decreases with age. Glomerular Filtration Rate (GFR) is a test used to check how well the kidneys are working. Specifically. It estimates how much blood passes through the glomeruli each minutes.

157. Closure of the newborn's foramen ovale is caused by :

- (a) A decrease in the aortic blood flow
(b) A decrease in pressure in the left atrium
(c) An increase in the pulmonary blood flow
(d) An increase in the pressure in the right atrium

ESIC Staff Nurse-2016 (01-03-2017 – Shift-II)

Ans : (c) The foramen ovale helps blood circulation more quickly in the absence of lung function. When baby is born and their lungs begin to work, the pressure inside the heart usually causes the foramen ovale to close some times it may not happen for a year or two → In the fetal heart, foramen ovale or foramen botalli to enter the left atrium from the right atrium. It is one of two fetal cardiac shunts, the other being the ductus arteriosus.

→ **Pulmonary Blood Flow (PBF)** constitutes the entire output of the right ventricle and supplies the lung with mixed venous blood draining all the tissues of the body. It is this blood that undergoes to gas exchange with the alveolar air in the pulmonary capillaries.

158. Which of the following is not a part of portal vein?

- (a) Splenic vein (b) Hepatic vein
(c) Gastric vein (d) Cystic vein

DME Karnataka Staff Nurse Recruitment exam - 2018

Ans : (b) The portal vein or hepatic portal vein is a blood vessel that carries blood from the gastrointestinal tract, gallbladder, pancreas and spleen to the liver. It splits into left and right veins before entering the liver. It supplies approximately 75% of blood flow to the liver. The portal vein is not a true vein, which means it does not drain into the heart.

159. Injection of diphtheria antitoxin gives:

- (a) Active immunity (b) Passive immunity
(c) Natural immunity (d) Cellular immunity

DME Karnataka Staff Nurse Recruitment exam - 2018

Ans : (b) Injection of diphtheria gives passive immunity. **Passive immunity** is the transfer of active humoral immunity of ready-made antibodies. Passive immunity can occur naturally, when maternal antibodies are transferred to the fetus through the placenta and it can also be induced artificially, when high levels of antibodies specific to a pathogen or toxin are transferred to non-immune persons through blood products that contain antibodies, such as in immunoglobulin therapy or antiserum therapy.

160. The immunity an individual develops after acquiring an infection is called

- (a) Active immunity
(b) Passive immunity
(c) Herd immunity
(d) All the above

UPNHM Staff Nurse -24/01/2021 (Shift-I)

Ans. (a) : The immunity an individual develops after acquiring an infection is called Active immunity.

161. Immunoglobins present in breast milk provides

- (a) Active immunity (b) Passive immunity
(c) Artificial immunity (d) No immunity

Mizoram (PSC) Staff Nurse 2019 (Paper-II)

Ans. (b) : Secretary immunoglobulin (IgA) antibodies are transferred from mother to child in colostrum and milk and confirm passive immunity. Passive Immunity can also be in the form of IgA and IgG found in human colostrum and milk of babies who are nursed.

Active immunity can be acquired through natural immunity or vaccine induced immunity.

Active immunity results when exposure to a disease organism triggers the immune system to produce antibodies to that disease.

162. Volume of blood pumped by the heart during 1 minute in a normal healthy adult:

- (a) 1000 ml/min (b) 1500 ml/min
(c) 2000 ml/min (d) 5000 ml/min

DME Karnataka Staff Nurse Recruitment exam - 2018

Ans : (d) Volume of blood pumped by the heart during the 1 minute in a normal healthy adult is 5000 ml/minute.

163. Hemoglobin has maximum affinity for :

- (a) CO (b) CO₂
(c) O₂ (d) NH₃

DME Karnataka Staff Nurse Recruitment exam - 2018

Ans : (a) Hemoglobin has maximum affinity for CO. Hemoglobin is involved in the transport of other gases. It carries some of the body's respiratory carbon dioxide (about 20-25% of the total) as carbamino hemoglobin, in which CO₂ is bound to the heme protein. Inside hemoglobin, carbon monoxide (CO) also binds in an angular fashion as if it were oxygen. This is because the entire binding pocket is made to allow oxygen to bind thus attempting everything to make oxygen comfortable home.

164. Cell mediated immunity is achieved by:

- (a) B cells (b) Neutrophils
(c) T cells (d) Eosinophils

AIIMS Bhuneswar Staff Nurse Exam-2018

Ans : (c) Cell mediated immunity is achieved by T cells. A T cell is a type of lymphocyte. T cells are one of the important white blood cells (WBCs) of the immune system and play a central role in the adaptive immune response. T cells are central regulators of the immune response and exert their actions by modulating the function of other immune cells and by affecting the behaviour of endothelial and parenchymal cells.

165. Peripheral resistance depends on:

- (a) Diameter of arterioles
(b) Degree of contraction of veins
(c) Blood volume
(d) Stroke volume

AIIMS Bhuneswar Staff Nurse Exam-2018

Ans : (a) Peripheral resistance depends on diameter of arterioles.

Total Peripheral Resistance (TPR) is the amount of resistance to blood flow present in the vascular system of the body.

166. Which of the following expresses CD3 Surface Antigen?

- (a) Granulocytes (b) T cells
(c) Monocytes (d) B cells

DSSSB Staff Nurse Exam-2017 (Shift-II)

Ans : (d) B cells express CD3 surface antigen. B cells also known as B lymphocytes are a type of white blood cell of the lymphocyte subtype. They function in the humoral immunity component of the adaptive immune system by secreting antibodies. Additionally B cells present antigens and secrete cytokines.

CD3 (cluster of differentiation 3) is a protein complex and T-cell co-receptor that is involved in activating both cytotoxic T cell (CD8 + T cells) and T helper cells (CD4 + T cells).

167. The heart is enclosed in a protective membrane called as

- (a) Endocardium (b) Mesocardium
(c) Pericardium (d) Cardium

DSSSB Staff Nurse Exam-2017 (Shift-II)

Ans : (c) Pericardium also called pericardial sac is a double walled sac containing the heart and the routes of the great vessels. It has two layers, an outer layer made of strong connective tissue (**fibrous pericardium**) and an inner layer made of serous membrane (**serous pericardium**). It encloses the pericardial cavity, which contain pericardial fluid and separates the heart from interference of other structures, protects its against infection and lubricate the heart's movements.

168. Congenital obstruction of the posterior nose at the entrance to the nasopharynx is called:-

- (a) Tracheoesophageal fistula
(b) Esophageal atresia
(c) Choanal atresia
(d) Diaphragmatic Hernia

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-II)

Ans : (c) Choanal atresia is a congenital disorder where the back of the nasal passage (choana) is blocked, usually by abnormal bony or soft tissue (membranous) due to failed recanalization of the nasal fossa during fetal development. It was first described by **Rockerer** in 1755.

169. Which phases of the Korotkoff sound is defined as the diastolic pressure?

- (a) The pressure level at which the first faint, consistent tapping sounds are heard
(b) The time during cuff deflation when a murmur of swishing sounds are heard
(c) The time when a distinct, abrupt, muffing of sound is heard
(d) The pressure level, when the last regular blood pressure sound is heard and after which all sound disappears

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-II)

Ans : (c) Korotkoff sounds are the sounds listened for taking blood pressure using a non-invasive procedure. They are named after **Dr. Nikolai Korotkov**, a Russian physician who discovered them in 1905

→ The fourth phase of Korotkoff sound is an abrupt fall in sound level and is sometimes taken as representing diastolic pressure, although the final loss of all sound (5th phase of korotkoff) is more widely accepted as indicating diastolic pressure.

170. The inability of the left ventricle to fill or pump sufficient blood to meet the needs of the tissues for oxygen and nutrients is:-

- (a) Decompensated heart failure
(b) Congestive heart failure
(c) Left Ventricular failure
(d) Right ventricular failure

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-II)

Ans : (c) In left ventricular failure or heart failure caused by **systolic dysfunction**, the left ventricular myocardium is weakened, often enlarged and the ventricles are unable to pump blood efficiently enough to meet the body's demands.

→ **Diastolic heart failure** occurs when signs and symptoms of heart failure are present but left ventricular systolic function is preserved (i.e. ejection fraction greater than 45 percent).

171. In which among the following situation we can observe elevation in jugular venous pressure?

- (a) Normal physical exam
- (b) Cardiac tamponed
- (c) Constrictive pericarditis
- (d) Myocarditis

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-I)

Ans : (c) Constrictive pericarditis is a medical condition characterized by a thickened, fibrotic pericardium, limiting the heart's ability to function normally.

Causes of constrictive pericarditis- Fungal and parasitic infections, tuberculosis, chronic pericarditis, incomplete drainage of purulent pericarditis.

Symptoms- Chest discomfort, edema, fatigue, dyspnoea on exertion.

Signs- Jugular Venous Distension, Pericardial knock, Pleural Effusion, Hepatomegaly.

172. The artery that supply blood to the diaphragm is called:-

- (a) Inferior mesenteric artery
- (b) Suprarenal artery
- (c) Inferior phrenic arteries
- (d) Celiac artery

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-I)

Ans : (c) The Inferior Phrenic Arteries (IPA) are paired branches of the abdominal aorta/cealic trunk supplying the diaphragm. Their importance lies with the fact that.

→ Inferior phrenic arteries (IPA) are the most common extrahepatic arterial supply of a hepatocellular carcinoma.

→ The IPA are two small vessels which supply the blood to diaphragm. They present much variety in their origin.

173. The cardinal signs of the body includes the following, EXCEPT:-

- (a) Temperature
- (b) Blood pressure level
- (c) Blood glucose level
- (d) Heart beat

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-I)

Ans : (c) A cardinal sign is a major symptom pain, heat, redness, swelling and loss of function. Cardinal signs-

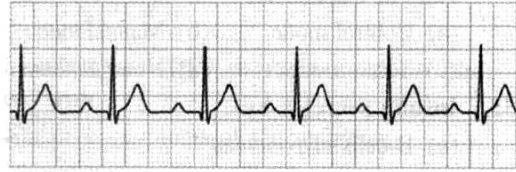
Pain- Inflammation can cause pain joints and muscles

Heat- When inflamed area of body feel warm. It is because there is more blood flow in those areas.

Redness- Inflamed areas of the body may appear red in color.

Swelling- is common when a part of the body is inflamed.

174. See the picture and record PR interval



- (a) 0.16
- (b) 0.20
- (c) 0.24
- (d) 0.8

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (c) Recorded PR interval of 6 boxes may be 0.24.

175. Heart sounds are produce by

- (a) Closer of heart valves
- (b) Contraction of atrium
- (c) Contraction of ventricles
- (d) SA node

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (a) In healthy adults, there are two normal heart sounds, often described as a lub and a dub that occur in sequence with each heart beat. These are produced by the closing of the atrioventricular valves and semi lunar valves.

176. Common cause of heart valve stenosis in India is

- (a) Rheumatic fever
- (b) Cardiomegaly
- (c) CAD
- (d) Artio scienosis

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (a) Common cause of heart valve stenosis in India is rheumatic fever. It is an inflammatory disease that can develop when strep throat or scarlet fever is not properly treated. Strep throat and scarlet fever are caused by an infection with Streptococcus.

177. Which blood vessel carry blood from lungs to heart

- (a) Pulmonary vein
- (b) Pulmonary artery
- (c) Superior vena cava
- (d) Aorta

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (a) Pulmonary vein are the veins that transfer oxygenated blood from the lungs to the heart. They are part of the pulmonary circulation. These pulmonary veins transport oxygenated blood while pulmonary arteries move deoxygenated blood from the heart to the lungs.

178. QRS complex occurs due to:

- (a) Atrial depolarization
- (b) Ventricular depolarization
- (c) Ventricular repolarization
- (d) Conduction through AV nodes

RUHS MSC. Nursing Exam-2017

Ans : (b) QRS complex occurs due to ventricular depolarization. A combination of the Q wave, R wave and S wave, the "QRS complex" represents ventricular depolarization. It is the combination of three of the graphecal deflections seen on a typical electrocardiogram (ECG). It is usually the central and most visually obvious part of the tracing. It is the main spike seen on an ECG line.

179. Normal portal venous pressure is:
 (a) 5 - 10 mmHg (b) 10 - 15 mmHg
 (c) 15 - 20 mmHg (d) 20 - 25 mmHg

RUHS MSC. Nursing Exam-2017

Ans : (a) Normal Portal Venous Pressure is 5-10 mmHg. Portal Venous Pressure (PVP) is the blood pressure in the hepatic portal vein. PVP is termed as portal hypertension and has numerous sequelae such as ascites and hepatic encephalopathy.

180. A physiologic risk associated with prolonged immobility is:

- (a) Decreased bone resorption
 (b) Formation of thromboembolism
 (c) Decreased serum calcium level
 (d) Increased hemoglobin formation

RUHS MSC. Nursing Exam-2017

Ans : (b) A physiologic risk associated with prolonged immobility is formation of thromboembolism. Thromboembolism formation in a blood vessel of clot (thrombus) that breaks loose and is carried by the blood stream to play another vessel.

181. Iron is stored in the body as:

- (a) Ferritin (b) Ferrous sulphate
 (c) Transferrin (d) Hemosiderin

RUHS MSC. Nursing Exam-2017

Ans : (a) Iron is stored in the body as ferritin. Ferritin is a blood protein that contains iron. In humans, it acts as a buffer against iron deficiency and iron overload. It is found in most tissues as a cytosolic protein but small amounts are secreted into the serum where it functions as an iron carrier. Plasma ferritin is also an indirect marker of the total amount of iron stored in the body, hence serum ferritin is used as a diagnostic test for iron-deficiency anemia.

182. All are type of hemolytic anemia EXCEPT

- (a) Iron deficiency anemia
 (b) Thalassemia
 (c) Spirosis
 (d) G6PD deficiency

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (d) All are type of hemolytic anemia except G6PD deficiency. G6PD deficiency is a genetic disorder that most often affects males. It happens when the body does not have enough of an enzyme called glucose 6 phosphate dehydrogenase (G6PD). It helps red blood cells work. It also protects them from substances in the blood that could harm them. Symptoms include fever, fatigue, dark urine, abdominal and back pain and pale skin.

183. Effect of vasodilator includes

- (a) Hypotension (b) Hypertension
 (c) Diuresis (d) Sweating

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (a) Effect of vasodilator includes hypotension. Vasodilators are medicines that dilate (widen) blood vessels, allowing blood to flow more easily through. Some act directly on the smooth muscle cells lining the blood vessels other have a central effect and regulate blood pressure most likely through the vasomotor center located within the medulla oblongata of the brain.

184. Which of the following is caused due to spasm of the coronary artery?

- (a) Stable angina (b) Variant angina
 (c) Unstable angina (d) Myocardial infection

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-III)

Ans : (b) Variant angina is caused due to spasm of the coronary artery (which supply blood to the heart muscle). The coronary artery can spasm as a result of exposure to cold weather, smoking, stress, cocaine and medicines that tighten or narrow blood vessels.

185. The process of tightening of the fibrin clot in such a way that the ruptured area of the blood vessel gets smaller and smaller, thus decreasing the hemorrhage, is called _____.

- (a) Fibrinolysis (b) Synarthrosis
 (c) Syneresis (d) Fibrositis

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (c) The process of tightening of the fibrin clot in such a way that the ruptured area of the blood vessel gets smaller and smaller thus decreasing the hemorrhage is called Syneresis.

186. Which of these is not a congenital heart disease?

- (a) Tetralogy of Fallot
 (b) Ischemic Heart Disease
 (c) Atrial Septal Defect
 (d) Tricuspid Atresia

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (b) Ischemic heart disease is not a congenital disease. Myocardial ischemia occurs when blood flow to the heart is reduced preventing the heart muscle from receiving enough oxygen. It reduces heart muscle's ability to pump blood. The common symptoms is chest pain or chest pressure and others-shoulder or arm pain, a fast heart beat, neck or jaw pain.

187. _____ is the term used for slower heart in an adult, usually less than 60 BPM.

- (a) Bradycardia (b) Tachycardia
 (c) Mesocardia (d) Arrhythmia

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (a) Bradycardia is the term used for slower heart in an adult usually less than 60 BPM. Symptoms may be dizziness, fatigue, weakness, sweating and breathing at very low, rates, fainting. Normal heart beat is 70-90 BPM.

188. The auscultatory area in the left midclavicular line at the level of the 5th intercostal space is the _____ area.

- (a) tricuspid (b) pulmonic
 (c) aortic (d) mitral

NVS Staff Nursing-19/09/2019

Ans : (d) The auscultatory area in the left midclavicular line at the level of the 5th intercostal space is the mitral area. Mitral area is the area of the chest wall over the apex of the heart where mitral valve sounds are heard best (usually between spaces 5-6 to the midclavicular line). About 70-80% of the blood that travels across the mitral valve occurs during the early filling phase of the left ventricle.

189. The right common carotid artery arises from:

- (a) Right axillary artery
- (b) Left subclavian artery
- (c) Brachiocephalic artery
- (d) Arch of aorta

NVS Staff Nursing–19/09/2019

Ans : (c) The right common carotid artery arises from **brachiocephalic artery**. It is only about **4-5 centimeters (cm)** in length from the aortic arch to the point where it bifurcates into the right subclavian artery and the right carotid artery. It carries blood from the aorta to the right side of the brain and right arm. This is a large blood vessel that provides most of the blood flow to these areas.

190. The collection of the lymphatic fluid in the pleural space due to the leak in the thoracic duct is known as:

- (a) Pleurodesis
- (b) Chylothorax
- (c) Lymphothorax
- (d) Hemothorax

NVS Staff Nursing–19/09/2019

Ans : (b) The collection of the lymphatic fluid in the pleural space due to the leak in the thoracic duct is known as chylothorax. It is a rare condition in which lymphatic fluid leaks into the space between the lung and chest wall. It can cause a severe cough, chest pain and difficulty in breathing. Chylothorax is a lymphatic flow disorder.

191. The collapse of the alveoli is prevented by:

- (a) Pleural fluid
- (b) Mucus
- (c) Cilia
- (d) Surfactant

NVS Staff Nursing–19/09/2019

Ans : (d) The collapse of the alveoli is prevented by surfactant. It is a substance which tends to reduce the surface tension of a liquid in which it is dissolved. The lungs produce surfactants at the cellular level in the breathing process by helping keep always open.

192. The last product of the process of blood coagulation is:

- (a) Prothrombin
- (b) Thrombin
- (c) Fibrin
- (d) Thromboplastin

NVS Staff Nursing–19/09/2019

Ans : (c) The last product of the process of blood coagulation is Fibrin. Fibrin is an insoluble protein that is produced in response to bleeding and is the major component of the blood clot. It is a tough protein substance that is arranged in long fibrous chains, it is formed from fibrinogen, is a soluble protein that is produced by the liver and found in the blood plasma.

193. Hemophilia B is the deficiency of:

- (a) Factor XI
- (b) Factor IX
- (c) Factor X
- (d) Factor VII

NVS Staff Nursing–19/09/2019

Ans : (b) Hemophilia B is a blood clotting disorder causing easy bruising and bleeding due to an inherited mutation of the gene for factor IX, and resulting in a deficiency of factor IX. It is less common than factor VIII deficiency (hemophilia A). Although it is passed down from parents to children about 1/3 of cases are caused by a spontaneous mutation.

194. Excessive hemolysis may result in the accumulation of which substance in the body?

- (a) Globulin
- (b) Haem
- (c) Bilirubin
- (d) Minerals

NVS Staff Nursing–19/09/2019

Ans : (c) Excessive hemolysis may result in the accumulation of bilirubin substance in the body. Bilirubin (BR) is the yellowish substance that occurs in the normal catabolic pathway that breaks down heme in the vertebrates. It forms after red blood cells break down and travels through the liver, gallbladder & digestive tract before being excreted.

195. It is better to count the pulse rate when it is irregular:

- (a) Radial pulse for a full minute
- (b) Apical pulse for a full minute
- (c) Radial pulse for 30 sec
- (d) Apical pulse for 30 sec

NVS Staff Nursing–19/09/2019

Ans : (b) It is better to count the pulse rate when it is irregular apical pulse for a full minute. The normal pulse for healthy adults ranges from 60 to 100 beats per minutes. The pulse rate may fluctuate and increase with exercise emotions injury and illness. Females ages 12 and older, in general, tend to have faster heart rate than do males.

196. Life span of platelets is

- (a) 90-120 days
- (b) 1-3 days
- (c) 8-12 days
- (d) 1 day

ISRO Satellite Centre, Bengaluru Staff Nurse -27/11/2016

Ans : (c) The life span of human platelets ranges between 8 to 12 days. Harker and Finch found it to be 9.5 ± 0.6 days. Senescent platelets are removed from the circulation by RES macrophages in the liver and spleen and to a lesser extent, by bone marrow and lungs.

197. Normal glomerular filtration (GFR) rate is ___

- (a) 100 ml/min
- (b) 125 ml/min
- (c) 150 ml/min
- (d) 175 ml/min

ISRO Satellite Centre, Bengaluru Staff Nurse -27/11/2016

Ans : (b) The normal range of GFR, adjusted for body surface area, is 100-130 average 125 ml/min/1.73 m² in men and 90-120 ml/min/1.73 m² in women younger than the age of 40. GFR is the measures of kidney function.

198. Normal systolic and distolic blood pressure range for an adult is:-

- (a) 140/100 mm hg
- (b) 220 / 80 mm hg
- (c) 120/ 90 mm hg
- (d) 120/80 mm hg

CRPF Staff Nurse 2014

Ans : (d) A normal blood pressure level is less than 120/80 mm hg.

199. Patient suffering with high blood pressure should be given:-

- (a) High Protein diet
- (b) Less fibre diet
- (c) Less sodium diet
- (d) Less unsaturated fatty acid diet

CRPF Staff Nurse 2014

Ans : (c) The first-choice medication for high blood pressure is a thiazide diuretic. For other people, a diuretic alone is not enough to control blood pressure. In these cases, a diuretic may be combined with a beta-blocker ACE inhibitor angiotensin II receptor blocker or calcium channel blocker and most efficient is less sodium diet.

200. Which one of the following vitamins is involved in blood clotting:

- (a) Vitamin K (b) Vitamin E
(c) Vitamin A (d) Vitamin D

BHU Nursing Officer Exam (22/09/2019)

Ans : (a) Vitamin K is used for the blood clot. Warfarin (Coumadin) is added to slow blood clotting. By helping the blood clot vitamin K might decrease the effectiveness of warfarin.

201. Which of the following is correct fetal hemoglobin (HbF):

- (a) HbF is composed of two alpha and two gamma subunits
(b) HbF has decreased oxygen carrying capacity
(c) HbF is present only in fetal life
(d) HbF is composed of two alpha and two beta subunits

BHU Nursing Officer Exam (22/09/2019)

Ans : (a) Fetal hemoglobin (HbF) is composed of two α (alpha) subunits and two γ (gamma) subunits. Whereas hemoglobin A (97% of total hemoglobin in adults) is composed of two α and two β (beta) subunits. In humans the α subunits is encoded on chromosome 16 and γ subunit is encoded on chromosome 11. HbF refers to fetal hemoglobin.

202. Intra-aortic balloon pump is used for:

- (a) Systolic increase in blood pressure
(b) Diastolic increase in blood pressure
(c) Mitral valvotomy
(d) Removal of aortic thrombus

BHU Nursing Officer Exam (22/09/2019)

Ans : (d) An intra- aortic balloon pump (IABP) is a type of therapeutic device. It helps your heart pump more blood. You may need it if your heart is unable to pump enough blood for your body. The IABP consists of a thin, flexible tube called a catheter. IABP is used for removal of aortic thrombus.

203. Which of the following is not required for clot formation:

- (a) Vitamin K (b) Calcium
(c) Plasmin (d) Fibrinogen

BHU Nursing Officer Exam (22/09/2019)

Ans : (c) Plasmin is not required for clot formation. Blood clotting is the process by which blood changes from liquid to gel and stop bleeding. When the blood vessels get injured platelets in blood produces prothrombin in the presence of vitamin K. The prothrombin then converts into the thrombin (active form) of thrombakinase and calcium ions. This thrombin then converts fibrinogen (inactive) into the fibrin then converts fibrinogen (inactive) fibrin thread then plugs the damaged part and appears like a clot.

204. Which one of the following occurs in allergy?

- (a) Neutrophilia (b) Lymphocytosis
(c) Monocytosis (d) Eosinophilia

BHU Nursing Officer Exam (22/09/2019)

Ans : (d) Eosinophilia occurs when a large number of eosinophils are recruited to a specific site in your body or when the bone marrow produces too many eosinophils. This can be caused by a variety of factor including parasitic and fungal diseases allergic reactions.

205. Which is the complication of blood transfusion?

- (a) Hyponatremia
(b) Hyperkalemia
(c) Hypercalcemia
(d) Increased Serum Albumin

BHU Nursing Officer Exam (24/06/2018)

Ans : (b) Hyperkalemia is a common complication is transfusion of stored blood. The supernatant of stored RBCs usually contains more than 60 mEq/L of potassium. Potassium in stored blood increases due to decrease in ATP production and leakage of potassium into the supernatant.

206. Heat Stroke is:

- (a) Heat cramps (b) Heat Collapse
(c) Heat exhaustion (d) Heat hyperthermia

BHU Nursing Officer Exam (24/06/2018)

Ans : (d) Heat stroke is a form of hyperthermia in which the body temperature is elevated dramatically. Heat stroke is a medical emergency and can be fatal if not promptly and properly treated. The cause of heat stroke is an elevation in body temperature, often accompanied by dehydration.

207. What is the normal Intracranial pressure?

- (a) 20-30 mm Hg (b) 30-40 mm Hg
(c) 5-15 mm Hg (d) 0-10 mm Hg

AIIMS Raipur Nursing Officer Main Aug-2019

Ans : (c) Normal adult intracranial pressure is defined as 5 to 15 mm Hg (7.5-20 cm H₂O). ICP values of 20 to 30 mm Hg represent mild intracranial hypertension. however, when a temporal mass lesion is present. Herniation can occur with ICP values less than 20 mm Hg.

208. What is the therapeutic blood lithium level in the body?

- (a) 1-3 mEq/L (b) 2-4 mEq/L
(c) 0.8 - 1.2 mEq/L (d) 0.1-1 mEq/L

AIIMS Raipur Nursing Officer Main Aug-2019

Ans : (c) A safe blood level of Lithium is 0.6 and 1.2 millequivalents per liter (mEq/L). Lithium toxicity can happen when this level reaches 1.5 mEq/L or higher. Severe Lithium toxicity happens at a level of 2.0 meq/L and above, which can be life threatening in rare cases.

Drug	Reference range
Lithium	0.8 – 1.2 mEq/L
Carbamazepine	4 – 12 µg/mL
Valproic acid	50 – 120 µg/mL
Nortriptyline	50 – 120 µg/mL

209. Child diagnosed with idiopathic thrombocytopenic purpura has the following clinical manifestation:

- (a) Patchiae
- (b) Dark coloured urine
- (c) External haemorrhage
- (d) Temperature more than 101°F

MP Staff Nurse Exam – 2013

Ans : (b) Idiopathic thrombocytopenic purpura is a blood disorder characterized by an abnormal decrease in the number of platelets in the blood. A decrease in platelets can result in easy bruising, manifestation of dark coloured urine and blood in vomit, urine and stool.

210. The most common cause of embolism is

- (a) Thrombus
- (b) Air bubbles
- (c) Atheromatous debris
- (d) Bone fragments

RRB Staff Nurse Exam – 21/07/2019 (Shift-II)

Ans : (a) Deep vein thrombosis is the primary cause of embolism. In deep vein thrombosis, blood clots form in the large veins of the legs. Sometimes a blood clot breaks free and is carried through the bloodstream. It may then cause an embolism by blocking an artery in the lungs, brain, or other organs.

211. The lack of oxygen in the tissue is called

- (a) Anorexia
- (b) Anoxia
- (c) Cyanosis
- (d) Hypoxia

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans: (d) Hypoxia is a state in which oxygen is not available in sufficient amount at tissue level to maintain adequate homeostasis.

Anorexia is the abnormal loss of appetite for food.

Cyanosis is the abnormal blue discoloration of the skin and mucous membrane.

Anorexia is an extreme form of hypoxia, and occurs when the body does not get any oxygen.

212. What is the positive sign that can be seen in deep vein thrombosis?

- (a) Homan's sign
- (b) Jaquemer's sign
- (c) Kerning's sign
- (d) Hegar's sign

RRB Staff Nurse Exam – 20/07/2019 (Shift-III)

Ans : (a) Homan's sign is often used in the diagnosis of deep venous thrombosis of the leg. A positive Homan's sign calf pain at dorsiflexion of the facial foot is thought to be associated with the presence of thrombosis.

213. Which is the largest serous membrane of the body?

- (a) Peritoneum
- (b) Mucosa
- (c) Serosa
- (d) Submucosa

RRB Staff Nurse Exam – 20/07/2019 (Shift-II)

Ans : (a) The pleura is the serous membrane, which forms the lining of the pleural cavity. The peritoneum is the serous membrane covering the abdominal cavity. The abdominal cavity is the largest serous cavity of the human body, followed by both pleural cavities. The surface of the peritoneum is equivalent to surface of the skin.

214. The antigen that forms loose and cotton wooly clumps during agglutination is _____.

- (a) D Antigen
- (b) F Antigen
- (c) H Antigen
- (d) Antigen

RRB Staff Nurse Exam – 20/07/2019 (Shift-II)

Ans : (c) Agglutination is the clumping of particles. It is a process that occurs if an antigen is mixed with its corresponding antibody called isoagglutinin. This term is commonly used in blood grouping. H antigen is a precursor to each of the ABO blood group antigen. When H antigen reacts with H antibody forms large, loose, fluffy clumps. Agglutination takes place rapidly.

215. Which one of the following substance is released during inflammatory process when platelets are activated?

- (a) Histamine
- (b) Heparin
- (c) Serotonin
- (d) Bradykinin

RRB Staff Nurse Exam – 20/07/2019 (Shift-II)

Ans : (c) Serotonin is transported by platelets and released upon activation. Serotonin is transported by platelets and released upon activation. This induces constriction of injure blood vessels and enhance platelets aggregation to minimize blood loss. Platelets are important players in the development of inflammation. Platelets interact with leukocytes and support their interaction with vessel wall and agression to tissue.

216. Which antibody crosses placenta?

- (a) IgA
- (b) IgG
- (c) IgE
- (d) IgM

AIIMS Bhuneswar Staff Nurse Exam-2018

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-III)

Ans : (b) IgG is a blood lymphatic and abundant antibody IgG and the only antibody that has the ability to cross the placenta. It provides immunity to the new born.

217. Cation present mostly in plasma is _____.

- (a) Sodium
- (b) Potassium
- (c) Calcium
- (d) Magnesium

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (a) Sodium is the most abundant electrolyte and the most abundant cation present in the blood plasma. Chloride present in a slightly smaller amount is the most abundant anion. The normal amount of sodium in human plasma is 136-145 millimoles per litre. The principal cation present in the blood plasma is potassium (K^+), Calcium (Ca^{2+}), Magnesium (Mg^{2+}) etc.

218. The innermost layer of the heart is called:

- (a) Serous pericardium
- (b) Myocardium
- (c) Endocardium
- (d) Fibrous pericardium

DSSSB Staff Nursing–30/08/2019 (Shift-I)

Ans : (c) The innermost layer of the heart cardiac wall is known as the Endocardium. It lines the cavity and valve of the heart. Three layers of tissue form the heart wall. The outer layer of the heart wall is the epicardium, the middle layer is the myocardium, and the inner layer is the endocardium.

219. Identify the immunoglobulin responsible for an anaphylactic-type reaction?

- (a) I_gG
- (b) I_gE
- (c) I_gM
- (d) I_gA

DSSSB Staff Nursing–28/08/2019 (Shift-III)

Ans. (b) : I_gE immunoglobulin is responsible for an anaphylactic type of reaction. Anaphylactic means an allergic reaction. I_gE immunoglobulin is an antibody produced by the immune system. If there is an allergy then the immune system transcends an allergen by producing an antibody called immunoglobulin I_gE.

220. Which immunoglobulin can cross the placenta and can provide passive immunity to the newborn?

- (a) IgG (b) IgE
(c) IgM (d) IgA

AIIMS Raipur Nursing Officer Main Aug-2019

Ans : (a) Immunoglobulins, also as antibodies are glycoprotein molecules produced by plasma cells (white blood cells). They act as a critical part of the immune response by specifically recognizing and binding to particular antigens, such as bacteria or viruses and aiding in their destruction. The 5 primary classes of immunoglobulins are IgG, IgA, IgD, IgM and IgE. IgG is the most common type of antibody found in blood circulation. IgG molecules are created and released by plasma B-cells. It provides passive immunity to the newborn.

221. Antibodies are produced by:

- (a) Plasma cells (b) Erythrocytes
(c) Monocytes (d) Basophiles

DSSSB Staff Nurse Exam-2017 (Shift-I)

Ans : (a) Antibodies are produced by the plasma cells. Antibody also called immunoglobulin (Ig) is a protective protein produced by the immune system in response to the presence of a foreign substance, called an antigen. Antibodies are heavy (~150 kDa) proteins of about 10 nm in size arranged in 3 globular regions that form a Y shape. In humans and many mammals, an antibody unit consists of 4 polypeptide chains two identical light and 2 heavy chains connected by disulfide bonds.

222. Substances that do not cross the placental barrier is:

- (a) IgG (b) IgA
(c) IgM (d) IgE

UPPSC Staff Nurse 10-04-2022

DSSSB Staff Nurse Exam-2017 (Shift-I)

Ans. (c) Substance that do not cross the placental barrier is IgM. Immunoglobulin (Ig) is a **glycoprotein** that is made in response to an antigen and can recognize and bind to the antigen that caused its production. In placental mammals there are five antibody classes known as IgA, IgD, IgE, IgG and IgM, which are further subdivided into subclasses such as IgA1, IgA2.

223. The immunity transferred by maternal antibodies across the placenta is called:

- (a) Passive immunity (b) Active immunity
(c) Herd immunity (d) Humoral immunity

NVS Staff Nursing-19/09/2019

Ans : (a) The immunity transferred by maternal antibodies across the placenta is called **passive immunity**. Passive immunity refers to a short-term immunity which results from the introduction of antibodies from the outside. Thereby, It does not require direct exposure of the body to the pathogens.

224. The production of antibodies is called:

- (a) humoral immune response
(b) Cellular immune response
(c) antigen dependent response
(d) antibody dependent response

Ans : (a) Humoral immunity is also called antibody-mediated immunity. With assistance from Helper T cells, B cells will differentiate into plasma B cells that can produce antibodies against a specific antigen. The humoral immune response deal with antigens from pathogens that are freely circulating, or outside the infected cells. It involves mainly B cells and takes place in blood and lymph.

225. Which is the only immunoglobulin transported through placenta to fetus?

- (a) IgD (b) IgM
(c) IgG (d) IgH

DSSSB Staff Nursing-28/08/2019 (Shift-I)

Ans : (c) Placental transfer of maternal IgM antibodies to the fetus is an important mechanism that provides protection to the infant while his/her humoral response is inefficient. IgG is the only antibody class that significantly crosses the human placenta. There are five primary classes of Ig-

- IgG
- IgM
- IgA
- IgD
- IgE

226. The one which carries waste materials from different parts of the body to kidneys is

- (a) Heart (b) Lungs
(c) Blood (d) Bone

UPNHM Staff Nurse -24/01/2021 (Shift-II)

Ans. (c) : Blood collects the waste material from the tissues and takes it to the kidneys where it is filtered out of the blood capillaries. Here, the useful materials are retained by the blood.

227. Which immunoglobulin can cross the placenta and can provide passive immunity to the newborn?

- (a) IgG, (b) IgE,
(c) IgM, (d) IgA,

AIIMS Raipur Nursing Officer Main 2019

Ans. (a) : Placental transfer of maternal IgG antibodies to the fetus is an important mechanism that provides protection to the infant while his/her humoral response is inefficient.

IgG is the only antibody class that significantly crosses the human placenta. This crossing is mediated by FcRn expressed on syncytiotrophoblast cells.

228. Leukopenia refers to:

- (a) Increase in WBC count
(b) Increase in RBC count
(c) Decrease in WBC count
(d) Increase in platelets

JHMCS Jhalawar Staff Nurse Exam

Ans : (c) Leukopenia is a condition in which there is a decrease in the number of white blood cells (WBCs) in the human blood due to which the part of the body where their deficiency is most there is the highest risk of infection.

229. What should be added to normal saline which is connected to arterial line measuring invasive blood pressure

- (a) Potassium (b) protamine
(c) Heparin (d) Calcium

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (c) Heparin should be added to the normal saline solution. Heparin also known as unbroken heparin, is a high sulphate glycosaminoglycon widely used as an anticoagulant injectable, used in various experimental and medical devices such as test tube and on renal dialysis.

230. In an emergency when the patient is unable to state his blood group, it is safer to cross match with _____ blood group.

- (a) A-ve (b) AB-ve
(c) AB+ve (d) O-ve

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (d) "O" Negative (O⁻) blood group people are called universal donors. People of this group can give blood to every one, and can take blood only from O group. In an emergency when the patient is unable to specify his blood group, it is safe to cross match it with the (O⁻) negative blood group.

231. Identify the type of hypersensitivity related to cell-mediated hypersensitivity.

- (a) Type-I (b) Type-III
(c) Type-IV (d) Type-II

DSSSB Staff Nursing-28/08/2019 (Shift-II)

Ans. (c) : Type-IV hypersensitivity, also called delayed-type hypersensitivity (DTH), involves T Cell-antigen interactions that cause activation and cytokine secretion. This type of hypersensitivity requires sensitized lymphocytes that respond 24-48 h after exposure to soluble antigens. Type four hypersensitivity reaction is a cell-mediated reaction that can occur in response to contact with certain allergens resulting in what is called contact dermatitis or in response to some diagnostic procedures as in the tuberculin skin test. Certain allergens must be avoided to treat this condition.

232. Administration of immunoglobulin is an example of:

- (a) active natural immunity
(b) active acquired immunity
(c) Passive natural immunity
(d) Passive acquired immunity

DSSSB Staff Nursing-28/08/2019 (Shift-II)

Ans. (d) : There are two examples of passive naturally acquired immunity: The placental transfer of I_gG from mother to fetus during pregnancy that generally lasts 4 to 6 months after birth; and the I_gA and I_gG found in human colostrum and milk of babies who are nursed. Artificially acquired passive immunity is a short term immunization achieved by the transfer of antibodies, which can be administered in several forms; as human or animal blood plasma or serum, as pooled human immunoglobulin for intravenous (IVIG) or intramuscular (IG) use, as high-titer human IVIG or IG from immunized.

233. What type of immunity is transferred to the fetus through the placenta ?

- (a) Active natural immunity
(b) Passive natural immunity
(c) Active artificial immunity
(d) Passive artificial immunity

ESIC Staff Nurse-2016 (01-03-2017 – Shift-II)

Ans : (b) Passive natural immunity is given to the fetus through the placenta. In this type of therapy, certain antibodies are delivered into the fetal blood stream in the form of Igm, through the mother's blood.

(iii) Respiratory system

234. The visceral pleura is :

- (a) The membrane lining surface of the lungs
(b) The membrane lining the wall of the thoracic cavity
(c) The thinnest portion of the peritoneum
(d) The fluid around the lungs

AIIMS Nagpur Nursing Officer (28/02/2020)

Ans. (a) : A pleura is a serous membrane that folds back on itself to form a two-layered membranous pleural sac. The outer layer is called the parietal pleura and attaches to the chest wall. The inner layer is called the visceral pleura and covers the lungs, blood vessels, nerves and bronchi.

235. Which among the following statement is correct about lung?

- (a) Right lung has two lobes and one fissure
(b) Left lung has three lobes and one fissure
(c) Right lung has three lobes and one fissure
(d) Right lung has three lobes and two fissures

Kerala (PSC) Staff Nurse (30/01/2021)

Ans. (d) : The right lung has two fissures (oblique fissure and horizontal fissure) which separate the lung into three lobes – upper, middle and lower. Each lobe has its own visceral pleura covering. Only the horizontal fissure is commonly seen on a frontal chest X-ray.

236. Dyspnoea means :

- (a) Absence of breathing
(b) Difficulty in breathing
(c) Increased breathing
(d) Decreased breathing

Kerala Staff Nurse (28/01/2016)

Ans. (b) : The term dyspnoea refers to sudden and severe shortness of breath or difficulty in breathing. It is one of the most common reasons for visits to the accident and emergency department of the hospital.

237. Normal respiration of a healthy person is :

- (a) 5 – 10/min (b) 10 – 14/min
(c) 15 – 20/min (d) 20 – 30/min

RPSC Staff Nurse Grade-II - 2010
Mizoram PSC Staff Nurse May 2019

Ans. (c) : Normal respiration rates for an adult person at rest range from 15 to 20 breaths per minute. Respiration is the metabolic process of oxygen intake and carbon dioxide release, It's controlled by a body system called the respiratory drive. The respiratory

drive is tied closely to the nervous system. When the central nervous system is altered or damaged, it can affect the rate of respiration.

238. If the lungs lose the elastic property :

- (a) Chest expands and becomes barrel shaped
- (b) Lungs collapse
- (c) Vital capacity increases
- (d) Functional Residual Capacity (FRC)decreases

Mizoram PSC Staff Nurse May 2019

Ans. (b) : Emphysema, the fourth leading cause of death in the United States, affects the walls of the millions of tiny air sacs in the lungs, which become inflamed and lose elasticity, causing the bronchioles to collapse.

239. Which part of the heart receives oxygenated blood -

- (a) Left auricle
- (b) Right auricle
- (c) Left ventricle
- (d) Right ventricle

[ESIC Staff Nurse Exam Delhi 2012]

Ans. (a) The **left auricle** also known as the **left atrial appendage (LAA)** is a thin pouch (flap) of the heart wall located on the anterior surface of the left atrium. It receives oxygenated blood and plays an important role in the **pumping of blood within the heart.**

240. Normal ratio of pulse and respiration is :

- (a) 1 : 2
- (b) 1 : 4
- (c) 3 : 1
- (d) 4 : 1

Mizoram PSC Staff Nurse May 2019

Ans. (b) : The average adult's respiration rate to heart rate ratio is approximately 1 : 4, which means that for each breath, the heart beats 4 times.

241. One of the most common complications of chronic asthma is :

- (a) Atelectasis
- (b) Emphysema
- (c) Pneumothorax
- (d) Pleural effusion

Mizoram PSC Staff Nurse May 2019

Ans. (b) Emphysema is a lung condition that causes shortness of breath. In people with Emphysema the air sacs in the lungs (alveoli) are damaged. Over time, the inner walls of the air sacs weaken and rupture – creating longer Air spaces instead of many small ones. Atelectasis occurs from a blocked airway (obstructive) or pressure from outside the lung (nonobstructive).

242. The outer covering of lungs :

- (a) Peritoneum
- (b) Pericardium
- (c) Pleura
- (d) Meninges

Kerala PSC Staff Nurse (19/02/2016)

Ans. (c) : The pleura includes two thin layers of tissue that protect and cushion the lungs. The outer layer (parietal pleura) lines the inside of the chest wall. The very thin space between the layers is called the pleural cavity.

The chest cavity is lined by a thin shiny membrane called the pleura, which covers the inside surface of the rib cage and spreads over the lungs as well. Normally the pleura produces a small amount of fluid which serves as a lubricant to the lungs as they move back and forth against the chest wall during respiration.

243. Which of the following is the normal respiratory rate of a healthy newborn?

- (a) 20/Min
- (b) 22/Min
- (c) 35/Min
- (d) 16/Min

AIIMS Bhopal Nursing Officer 23/05/2018 (Shift-I)

Ans. (c) : A newborn's normal breathing rate is about 30 to 60 times per minute. This may slow to 30 to 40 times per minute when the baby is sleeping. A baby's breathing pattern may also be different. A baby may breath fast several times, then have a brief rest for less than 10 seconds, then breath again.

244. The cartilage that completely encircles the larynx with the narrow part anteriorly and the broad part posteriorly is called :

- (a) Thyroid cartilage
- (b) Cricoid cartilage
- (c) Arytenoid cartilage
- (d) Epiglottis

AIIMS Raipur Staff Nurse 2017 (Shift-II)

Ans. (b) : The cartilage that completely encircles the larynx with the narrow part anteriorly and the broad part posteriorly is called Cricoid cartilage.

245. _____ is the process of exchange of gases between capillary blood and local blood cells.

- (a) Anaerobic respiration
- (b) Internal respiration
- (c) Cellular respiration
- (d) External respiration

AIIMS Raipur Nursing Officer Main Aug-2019

Ans. (b) : Internal respiration involves gaseous exchange between the blood stream, tissues and cellular respiration. Gas exchange in tissues is a result of surface area, gas partial pressure gradients, and the blood perfusion of those tissues.

246. The normal range of respiration is :-

- (a) 10-12 breaths/minute
- (b) 12-20 breaths/minute
- (c) 20-22 breaths/minute
- (d) 16-24 breaths/minute

AIIMS Raipur Staff Nurse 2017 (Shift-I)

Ans. (b) : Respiratory rate: A person's respiratory rate is the number of breaths taken per minute. The normal respiration rate for adult at rest is 12-20 breaths per minute.

Age	Breaths per minute
Birth to 1 year old	30-60
1-3 year old	24-40
3-6 year old	22-34
6-12 year old	18-30
12-18 year old	12-16
over 18 year old	12-20

247. When the respiratory rate of a 12 months old child is 35 breaths/minute, the most appropriate nursing action is:

- (a) Notify the physician
- (b) Administer oxygen
- (c) Reassess respiratory rate in 15 minutes
- (d) Document the findings

RPSC Nursing Tutor Exam- 2009

Ans : (a) When the respiratory rate of a 12 months old child is 35 breaths/minute, the most appropriate nursing action is notify the physician. Respiratory rate for an adult at rest is **12-20 breaths** per minute. The normal respiratory rate for kids is **30-60** and varies by age.

248. The largest volume of air, which can be expelled from the lungs during maximal expiration is called:-

- (a) Tidal volume
- (b) Residual volume
- (c) Inspiratory reserve volume
- (d) Expiratory reserve volume

AIIMS Raipur Staff Nurse 2017 (Shift-I)

Ans. (d) : The largest volume of air, which can be expelled from the lungs during maximal expiration is called Expiratory Reserve Volume (ERV). Its normal value is 1000 ml (1L).

- Inspiratory Reserve Volume (IRV) is an additional volume of air that can be inspired forcefully after the end of normal inspiration. Its normal value is 3300 ml (3.31).
- Tidal Volume (TV) is the volume of air breathed in and out of lungs in a single normal quiet respiration. Its normal value is 500 ml (0.5L).
- Residual Volume (RV) is the volume of air remaining in lungs even after forced expiration. Its normal value is 1200 ml (1.2l).

249. The normal tidal volume is-

- (a) 100 ml
- (b) 600 ml
- (c) 400 ml
- (d) 500 ml

RRB Staff Nurse Grade-II - 2012

Ans : (d) Tidal volume is the volume of air moved between one normal inhalation and one normal exhalation. This means that no extra effort is made to increase air intake or increase air output. Tidal volume is precisely measured, as in gas exchange calculation, the symbol TV or V.T. is used. The normal tidal volume (T.V.) is 500 ml.

250. Under normal circumstances, the volume of Inspired Air is

- (a) 500 ml
- (b) 400 ml
- (c) 300 ml
- (d) 200 ml

RPSC Staff Nurse 2007

Ans. (a) : Tidal Volume is the amount of air that moves in or out of the lungs with each respiratory cycle.

- It measures around 500 ML in an average healthy adult male and approximately 400 ML in a healthy female.
- Tidal volume is vital when it comes to setting the ventilators in critically ill patients.
- The lungs are responsible for delivering a tidal volume capable of maintaining adequate ventilation.

251. Which of the following allows air to pass into the lungs

- (a) Aorta
- (b) Esophagus
- (c) Heart
- (d) Trachea

MP CHO 27/07/2021 (Shift-I)

Ans. (d) : Trachea is a long, U-shaped tube that connects larynx (voice box) to lungs. The trachea is often called the windpipe. It's key part of respiratory system.

When air breathe in, it travels from nose or mouth through larynx. It then passes through trachea to bronchi. Bronchi carry the air to lungs.

252. The most powerful stimulus for respiratory centre is:

- (a) Carbon dioxide excess
- (b) Oxygen lack
- (c) Increased pH of blood
- (d) Oxygen excess

AIIMS Bhuneswar Staff Nurse Exam-2018

Ans : (a) The most powerful stimulus for respiratory centre is carbon dioxide excess. As the partial pressure of CO₂ in arterial blood rises, ventilation increases nearly linearly. If CO₂ levels increase, the respiratory center (medulla and pons) is stimulated to increase the rate and depth of breathing. The body's respiratory center in the medulla is normally stimulated by an increased concentration of CO₂ and to lesser extent by decreased levels of O₂ in arterial blood.

253. What is Biot's respiration?

- (a) Normal breathing followed by periods of apnea
- (b) Normal breathing pattern with proper rate and rhythm
- (c) Regular rate and depth of breathing that decrease until dyspnoea
- (d) Increased rate and depth of breathing

DSSSB Staff Nursing-28/08/2019 (Shift-III)

Ans. (a) : Biot's respiration is an abnormal pattern of breathing characterized by groups of regular deep inspirations followed by regular or irregular periods of apnea. It is named for Camille Bitot who characterized it in 1876. Biot's respiration is caused by damage to the pons due to strokes or trauma or by pressure on the pons due to uncal or tentorial herniation.

254. Continuous musical sounds heard on expiration are called.

- (a) bronchial sounds
- (b) pleural friction rub
- (c) wheezes
- (d) crackles

DSSSB Staff Nursing-28/08/2019 (Shift-III)

Ans. (c) : A wheezes is light pitched continuous musical sound which may occur during inspiration and/or expiration, due to an obstructive process. These sounds may also be heard when there is delayed opening of collapsed alveoli. Crackles are typically heard during inspiration and can be further defined as coarse or fine.

255. What is the first step in the aerobic glycolysis Sequence (Pathway)?

- (a) Glucose 6- phosphate
- (b) Phaspho-Furctokinase
- (c) Piruvate
- (d) Furctose 6 - Phosphate

DSSSB Staff Nursing-28/08/2019 (Shift-III)

Ans. (a) : The first step in glycolysis is catalyzed by hexokinase an enzyme with broad specificity that catalyses the phosphorylation of six carbon sugars. Hexokinase phosphorylates glucose using ATP as the source of the phosphate producing **glucose-6-phosphate** a more reactive form of glucose. Aerobic glycolysis is a series of reactions where oxygen is required to reoxidize NADH to NAD.

256. How is the Functional Residual Capacity (FRC) measured?

- (a) Expiratory Reserve Volume (ERV) + Residual Volume (RV)
- (b) Expiratory Reserve Volume (ERV) + Inspiratory Reserve Volume (IRV) + Tidal Volume (V_T)
- (c) Inspiratory Reserve Volume (IRV) + Residual Volume (RV)
- (d) Inspiratory Reserve Volume (IRV) + Tidal Volume (V_T)

DSSSB Staff Nurse – 27/08/2019 (Shift-III)

Ans. (a) : The Functional Residual Capacity (FRC) is the volume in the lungs at the end of passive expiration (normal exhalation). It is determined by opposite forces of the expanding chest wall and the elastic recoil of the lungs. A normal FRC = 1.7 to 3.5

$$\text{FRC} = \text{RV} + \text{ERV}$$

257. The expectoration or blood from the respiratory tract is called:

- (a) Hematuria
- (b) Hematemesis
- (c) Hemoptysis
- (d) Melena

NVS Staff Nursing–12/01/2018

Ans : (c) The expectoration or blood from the respiratory tract is called hemoptysis.

Blood in the urine or infection of the excretory organ is called hematuria.

Vomiting of the stomach contents mixed with blood or the regurgitation of blood only is called hematemesis.

Dark stool with or without visible blood is known as melena.

258. The process by which ADP phosphorylated by Pi (inorganic phosphate) to ATP in the electron transport chain is known as _____

- (a) Oxidative phosphorylation
- (b) Oxygenases
- (c) Hydroperoxidases
- (d) Oxidases

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (a) The process by which ADP phosphorylated by Pi (inorganic phosphate) to ATP in the electron transport chain is known as oxidative phosphorylation. It is the process in which ATP is formed as a result of transfer of electrons from NADH or FADH_2 to O_2 by a series of electron carriers. This process takes place in mitochondria is the major source of ATP in aerobic organisms.

259. Normal respiratory rate and rhythm is termed as _____.

- (a) Apnea
- (b) Tachycardia
- (c) Eupnea
- (d) Bradycardia

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (c) Normal respiratory rate and rhythm is termed as eupnea.

Apnea is a technical term for suspension of external breathing. During apnea there is no movement of the muscles of respiration and the volume of the lungs initially remains unchanged. Tachycardia is a rapid heartbeat that may be regular or irregular but is out of proportion to age and level of exertion or activity. Slower than-expected heart rate, generally beating fewer than 60 beats per minute is called bradycardia.

260. The maximum amount of air that can be dissipated after a maximum respiratory effort is called-

- (a) Tidal volume
- (b) Residual volume
- (c) Vital capacity
- (d) Functional waste capacity

[ESIC Staff Nurse Exam March II - 2016]

Ans. (c) The maximum amount of air that can be dissipated after a maximum respiratory effort is called **vital capacity (VC)** of the lungs. A normal adult has a vital capacity between 3-5 litres. It is equal to the sum of **Inspiratory Reserve Volume (IRV)**, **Tidal Volume (TV)** and **Expiratory Reserve Volume (ERV)**. Vital capacity (VC) can be measured by a wet or regular pyrometer.

261. Which part of the body is related with respiratory system.

- (a) Brains
- (b) Kidney
- (c) Lungs
- (d) Liver

[ESIC Staff Nurse Exam I - 2016]

Ans. (c) The **lungs** are a pair of spongy air filled organs located on either side of the chest (thorax). The **trachea (windpipe)** conducts inhaled air into the lungs through its tubular branches, called bronchi. The bronchi then divide into smaller and smaller branches (bronchioles). It's main role is to bring in air from the atmosphere and pass oxygen into the blood stream. From there, it circulates to the rest of the body.

262. Which organ of the body is involved in the process of respiration?

- (a) Liver
- (b) Kidney
- (c) Brain
- (d) Lungs

ESIC Staff Nurse-2016 (01-03-2017 – Shift-II)

Ans : (d) **Lungs** is a body organ which involves in the process of respiration.

In mammals and most of the vertebrates two lungs are located near the backbone on either side of the heart. Their function is the respiratory system is to extract oxygen from the atmosphere and transfer it into the bloodstream and to release carbon dioxide from the bloodstream into the atmosphere, in a process of gas exchange. The lungs also provide airflow that makes vocal sounds including human speech possible.

263. The right lung is divided-

- (a) One lobes
- (b) Three lobes
- (c) Two lobes
- (d) Four lobes

RRB Staff Nurse Grade-II - 2012

Ans : (b) The **right lung** is divided into **three** different sections, called **lobes**. The lobes are made of sponge-like tissue that is surrounded by a membrane called **pleura** which separates the lungs from the chest wall of the lungs are the primary organ of respiratory system.

264. Respiratory centre is situated in which part of brain?

- (a) Medulla (b) Pons
(c) Cerebellum (d) Thalamus

JHMCS Jhalawar Staff Nurse Exam

Ans : (a) The respiratory centre consists of areas of the brain that are responsible for automatic control of breathing. Nerve cells in the part of the lower brain stem, known as the **medulla oblongata**, initiate and set the rhythm of the respiration.

The respiratory center is located in the **medulla oblongata** and **pons**, in the blood stem. The respiratory center is made up of three major groups of neurons, two in the medulla and one in the pons.

- The medulla regulates many of the vital functions of the human body including **respiration, heart rate, and blood pressure**. Regarding its role in the circulation of blood throughout the body, the medulla oblongata works with the nucleus of the solitary tract.
- Medulla oblongata controls autonomic functions such as **breathing, heart and blood vessel function, sneezing and swallowing**.

265. The destruction of alveolar walls is called :

- (a) Emphysema (b) Bronchitis
(c) Emphysema (d) Lung abscess

RRB Staff Nurse-2015 (08-02-2015)

Ans : (c) **Emphysema** is a lung condition that causes shortness of breath. In this, the air sacs in lungs (alveoli) are damaged. By the time, the inner walls of air sacs weaken and rupture creating larger air spaces instead of many small ones. This reduces the surface area of the lungs and intern, amount of oxygen that reaches your bloodstream.

- Smoking is the most common cause of emphysema.
- It is a progressive lung condition that is a form of chronic obstructive pulmonary disease.

266. The ratio for giving external chest compression and breathing in CPR:

- (a) 30 : 2 (b) 15 : 2
(c) 30 : 4 (d) 15 : 4

DME Karnataka Staff Nurse Recruitment exam - 2018

Ans : (a) The ratio for giving external chest compression and breathing in CPR is 30 : 2

CPR (Cardiopulmonary Resuscitation) is an emergency procedure that combines chest compressions often with artificial ventilation in an effort to manually preserve intact brain function until further measures are taken to restore spontaneous blood circulation & breathing in a person who is in cardiac arrest.

267. Concentration of oxygen in expired air is about?

- (a) 0% (b) 10%
(c) 12% (d) 16%

BHU Nursing Officer Exam (22/09/2019)

Ans : (d) About 16 % of oxygen are found in expired air.

→ Inhaled and exhaled air

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
CO ₂	0.04	4
Nitrogen	79	79

268. Mouth to mouth respiration provides what percentage of Oxygen?

- (a) 10 (b) 16
(c) 21 (d) 100

BHU Nursing Officer Exam (24/06/2018)

Ans : (b) Oxygen-The efficiency of artificial respiration can be greatly increased by the simultaneous use of oxygen therapy. The amount of oxygen available to the patient in mouth-to-mouth is around 16%

269. The accumulation of pus in the pleural cavity is called:

- (a) Empyema (b) Hemothorax
(c) Pneumothorax (d) Hydrothorax

DSSSB Staff Nursing-30/08/2019 (Shift-I)

Ans : (a) The term empyema is most commonly used to refer to pus-filled pockets that develops in the pleural space. This is the slim space between the outside of the lungs and the inside of the chest cavity. Empyema is a serious condition that requires treatment.

270. Atmospheric pressure is important in the process-

- (a) Blood flow (b) Micturition
(c) Reproduction (d) Breathing

[RRB Staff Nurse Exam 2015]

Ans. (d) Atmospheric pressure is important in the process of breathing **ventilation** or **breathing** is the process of moving air into and out of the lungs to facilitate gas exchange with the **internal environment**, mostly to bring oxygen and flush out carbon dioxide. **Breathing** or "**external respiration** brings air into the alveoli through diffusion.

271. The collapse of the alveoli due to obstruction or hypoventilation is called

- (a) Emphysema (b) Empyema
(c) Atelectasis (d) Bronchiectasis

Kerala (PSC) Staff Nurse (9/07/2021)

Ans. (c) : Atelectasis is a complete or partial collapse of the entire lung or area (lobe) of the lung. It occurs when the tiny air sacs (alveoli) within the lung become deflated or possibly filled with alveolar fluid. Atelectasis is one of the most common breathing (respiratory) complications after surgery.

272. Increased respiratory rate over 24 breaths per minute :

- (a) Tachypnoea (b) Bradypnoea
(c) Apnoea (d) Orthopnoea

Kerala PSC Staff Nurse (19/02/2016)

Ans. (a) : Tachypnoea is the term that your health care provider uses to describe your breathing if it is too fast especially if you have other medical cause. The term hyperventilation is usually used if you are taking rapid deep breaths.

Symptoms of Tachypnea -

- (1) Shortness of breath
- (2) Chest pain which may be more severe on one side of the chest
- (3) Sharp pain when inhaling
- (4) Pressure in the chest that gets worse over time
- (5) Blue discoloration of the skin or lips
- (6) Increased heart rate
- (7) Rapid or clothing
- (8) Confusion or dizziness.

273. Tachypnoea means-

- (a) Decreased respiratory rate
- (b) Increased respiratory rate
- (c) Increased blood pressure
- (d) Increased heart rate

RRB Staff Nurse Grade-II - 2012**Ans : (b)** See the explanation of above question.**274. Total cessation of breathing is termed as :**

- (a) Eupnoea
- (b) Hyperpnoea
- (c) Bradypnoea
- (d) Apnoea

Kerala PSC Staff Nurse (19/02/2016)

Ans. (d) : A Temporary cessation of breathing called apnea. Sleep apnoea is a condition in which patients stop breathing for short periods during sleep. People who have sleep apnoea are may not be aware they have it. Sleep apnoea is when breathing stop and starts while you sleep. The most common type is called obstructive sleep apnoea (OSA). Sleep apnoea needs to be treated because it can lead to more serious problems.

(iv) Excretory system**275. Which are the functional unit of the kidneys?**

- (a) Nephrons
- (b) Neurons
- (c) Nerve Cells
- (d) Nerve Fibres

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)**[RRB Staff Nurse Exam 2015]**

Ans : (a) Nephrons are the functional unit of the kidneys. One pair of the kidney is found in the abdomen. The kidneys remove waste and extra water from the blood (as urine) and help keep chemicals (such as sodium, potassium and calcium) balanced in the body. The kidneys also make hormones that help to control blood pressure and stimulate bone marrow to make red blood cells.

276. Except which, all of the following are functions of the kidney-

- (a) Manufacture of erythropoietin
- (b) Formation of urea
- (c) To maintain water balance
- (d) To maintain acidic balance

[BSF Staff Nurse Exam 2014]**CRPF Staff Nurse 2014**

Ans. (b) The major function of the kidneys is to remove waste products and excess fluid from the body. These waste products and excess fluid are removed through the urine. Erythropoietin is a glycoprotein hormone naturally produced by the peritubular cells of the kidneys that stimulates red blood cells production. The production of urine involves

highly complex steps of excretion and absorption. Formation of urea takes place in the liver. Amino acids is converted to ammonia and this is further converted into less toxic urea by liver.

277. The normal Specific gravity of urine is :

- (a) 1.110 - 1.125
- (b) 1.010 - 1.025
- (c) 1.200 - 1.205
- (d) 1.030 - 1.045

AIIMS Raipur Nursing Officer Main Aug-2019**Kerala Staff Nurse (28/01/2016)**

Ans. (b) : Specific gravity of urine is usually 1.010–1.025 (normal range 1.003–1.030) and highest in the morning. A value 1.025 indicates normal concentrating ability. A value 1.035-1.040 suggests possible contamination, very high levels of glucose or recently received low- molecular weight dextran or high-density radiopaque dyes.

278. Which one of the following is the process of urination resulting from voluntary and involuntary muscles?

- (a) Micturition process
- (b) Prostate process
- (c) Kidney process
- (d) Glomerular process

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans : (a) Micturition is a less-often used, but proper term for urination or voiding. It results from an interplay of involuntary and voluntary actions by the internal and external urethral sphincters. When bladder volume reaches about 150 ml, an urge to void is sensed but is easily overridden.

279. Glomerular filtration rate clinically estimated by:

- (a) Inulin clearance
- (b) Creatinine clearance
- (c) Sorbitol clearance
- (d) Mannitol clearance
- (e) Sucrose clearance

CGPSC Nursing Officer 2015

Ans. (b) : GFR is usually accepted as the best overall index of kidney function. A clinician or medical laboratory can estimate GFR from a person's serum creatinine level with some or all the variables. Normal GFR varies according to gender, age, weight and race. In most healthy people, the normal GFR is 90 ml/min/1.73 m₂ or higher.

280. Length of the female urethra :

- (a) 1 cm
- (b) 2 cm
- (c) 3 cm
- (d) 4 cm

Kerala Staff Nurse (28/01/2016)

Ans. (d) : The female urethra is embedded within the vaginal wall and its opening is situated between the labia. The female urethra is much shorter than male urethra. The female urethra is small tube that carries urine from the bladder to outside the body during urination. It extends from the base of urinary bladder to the urinary meatus hence having a length of 4 cm.

281. The odour of normal urine is :

- (a) Sweet
- (b) Acidic
- (c) Alkaline
- (d) Aromatic

Mizoram PSC Staff Nurse May 2019

Ans. (d) : Urine usually does not smell very strong but has a slightly "nutty" (aromatic) odour. Some diseases can cause a change in the normal odour of urine.

282. The relationship between fluid intake and output is :

- (a) Fluid intake should be double the urine output
- (b) Fluid intake should be approximately equal to the urine output
- (c) Fluid intake should be half the urine output
- (d) Fluid intake should be inversely proportional to the urine output

Mizoram PSC Staff Nurse May 2019

Ans. (b) : The core principle of fluid balance is that the amount of water lost from the body must equal the amount of water taken in for example, in humans, the output (via respiration, perspiration, urination, defecation, and excretion) must equal the input (via eating and drinking or by parenteral intake).

283. Pressure caused by water volume in the vessels is called :

- (a) Hydrostatic pressure
- (b) Oncotic pressure
- (c) Osmotic pressure
- (d) None of these

Mizoram PSC Staff Nurse May 2019

Ans. (a) : Hydrostatic pressure is the "pushing" force on water due to the presence of more fluid in one region than another.

Osmotic pressure : It is the "pulling" force on water due to the presence of solutes in solution.

Oncotic pressure : Oncotic pressure or colloid osmotic pressure is a form of osmotic pressure induced by the proteins, notably albumin in a blood vessel's plasma that causes a pull on fluid back into the capillary.

284. The amount of water excreted as urine per day is about:

- (a) 1000 ml
- (b) 1500 ml
- (c) 100 ml
- (d) 500 ml

DSSSB Staff Nursing-30/08/2019 (Shift-I)

Ans : (b) The normal range for 24-hour urine volume is 800-2000 ml per day (with a normal fluid intake of about 2 liters per day).

285. Epispadias means:

- (a) Abnormal urethra opening on the dorsal opening of penis
- (b) Abnormal urethra opening on the ventral opening of penis
- (c) Abnormal urethral opening at the tip of the penis
- (d) Abnormal urethral opening at the scrotal sac

DSSSB Staff Nursing-28/08/2019 (Shift-I)

Ans : (a) An epispadias is a rare type of malformation in which the urethra ends, in males in an opening on the upper aspect of the penis, and in females when the urethra develops too far anteriorly. It occurs in around 1 in 120000 male and 1 in 500000 female births. In this the urethra does not develop into a full tube and the urine exits the body from an abnormal location.

286. Cystometry is _____ study in change of volume and pressure.

- (a) Rectum
- (b) Bladder
- (c) Liver
- (d) Spleen

NVS Staff Nursing-12/01/2018

Ans : (b) Cystometry is a test used to look for problems with the filling and emptying of the bladder. The bladder is a part of the urinary tract. It's a hollow muscular organ that relaxes and expands to store urine. It measures the amount of urine in the bladder.

287. A strong urge to urinate occurs when the volume of the bladder increases to-

- (a) 400 ml
- (b) 600 ml
- (c) 800 ml
- (d) 1000 ml

[ESIC Staff Nurse Exam March II - 2016]

Ans. (b) A strong urge to urinate occurs when the volume of the bladder increases to 600 ml than normal 400 ml. Capacity of the bladder volume depends on the age varies with the age i.e. at the birth 20-50 ml and in adult 400-600 ml.

288. Pepsinogen secreted by:

- (a) Chief cells
- (b) Mast cells
- (c) Beta cells
- (d) Parietal cells

AIIMS Jodhpur & Rishikesh Nurse Exam-2017

Ans : (a) Pepsinogen secreted by chief cells in the stomach wall and converted into the enzyme pepsin by gastric acid. Gastric chief cells (also known as peptic or a zymogenic cell) is a cell in the stomach that releases pepsinogen and chymosin. It is a digestive enzymes that helps in the digestion of proteins.

289. A competitive diver approaches the end of the board with rapidly beating heart and a dry mouth, a result of increased-

- (a) Adrenaline
- (b) Amines
- (c) Cortisone
- (d) Endorphins

DSSSB Staff Nurse Exam-2017 (Shift-II)

Ans : (a) Adrenaline also called epinephrine hormone. It is secreted mainly by the medulla of the adrenal glands and that functions primarily to increase cardiac output and to raise glucose levels in the blood. It plays an important role in the "fight or flight" response by increasing blood flow to muscles, output of the heart, pupil dilation response and blood sugar level.

290. Human chorionic gonadotropin is produced by:

- (a) Cytotrophoblast
- (b) Yolk sac
- (c) Decidua
- (d) Syncytiotrophoblast

AIIMS Bhuneswar Staff Nurse Exam-2018

Ans : (d) Human Chorionic Gonadotropin (HCG) is often called the pregnancy hormone because it is made by cells formed in placenta, which nourishes egg after it has been fertilized and becomes attached to the uterine wall.

Syncytiotrophoblast is the outer syncytial layer of the trophoblast that actively invades the uterine wall forming the outermost fetal component of the placenta.

291. Oxytocin is secreted by:

- (a) Adrenal cortex (b) Adrenal medulla
(c) Posterior pituitary (d) Anterior pituitary

AIIMS Bhuneswar Staff Nurse Exam-2018

Ans : (c) Oxytocin is a peptide hormone and neuropeptide. It is normally produced in the hypothalamus and released by the posterior pituitary. It plays a role in reproduction, child birth and period after the childbirth. Oxytocin (oxt) is released into the bloodstream as a hormone in the response to love and in labor.

→ In females, the oxytocin hormone triggers labor and the release of breastmilk. In males, oxytocin helps move sperm.

292. The most important role of fluid balance in the body is-

- (a) Liver (b) Heart
(c) Lungs (d) Kidneys

RRB Staff Nurse Grade-II - 2012

Ans : (d) The most important role of fluid balance in the body is **kidneys**. It is one of a pair of organs in the abdomen. The kidneys **remove waste and extra water from the blood (as urine)** and help keep chemicals (such as Na, Ca and K) balanced in the body. It also make hormones that help control blood pressure and stimulate bone marrow to make red blood cells.

293. The main function of kidney is to:

- (a) eliminate oxygen
(b) regulate fluid balance and removing waste products
(c) metabolise vitamins
(d) eliminate Carbon dioxide

RRB Staff Nurse-2015 (08-02-2015)

Ans : (b) See the explanation of above question.

294. The urine bag is called-

- (a) Urinary bladder (b) Spleen
(c) Kidney (d) Large intestine

RRB Staff Nurse Grade-II - 2012

Ans : (a) The urine bag is called **urinary bladder**. It is a **hollow muscular organ** in the lower abdomen that stores urine. The kidneys filter waste from the blood and produce urine, which enters the bladder through two tubes called **ureters**. Urine leaves the bladder through another tube the **urethra**.

295. Pre renal failures occur in:

- (a) Nephrolithiasis
(b) Heart failure
(c) Toxic nephropathy
(d) Glomerulonephritis

ESIC Staff Nurse-2016 (01-03-2017 – Shift-II)

Ans : (b) Pre renal failures occurs in heart failure.

Heart failure is a pathophysiological state, a chronic progressive condition in which the heart muscle is unable to pump enough blood to meet the body's needs for blood and oxygen. The term congestive heart failure is often used as one of the common symptoms is congestion or build-up of fluid in a person's tissues and veins in the lungs or other parts of the body.

296. In human each kidney has large numbers of filtration units called

- (a) Neutrons (b) Neurons
(c) Neptune (d) Nephrons

ESIC Staff Nurse-2016 (01-03-2017 – Shift-II)

Ans : (d) In human each kidney has large numbers of filtration units called **nephrons**. Each of the functional units in the kidney consisting of a glomerulus and an encompassing Bowman's capsule and its associated tubules, through which the glomerular filtrate passes before emerging as urine. It actually produces urine in the process of removing waste and excess substances from the blood. There are about 1,000,000 nephrons in each human kidney.

297. Malpighian body is constituted by:

- (a) Glomerulus only
(b) Glomerulus and efferent vessel
(c) Glomerulus and afferent vessel
(d) Glomerulus and Bowman's capsule

DME Karnataka Staff Nurse Recruitment exam - 2018

Ans : (d) **Malpighian body** is constituted by glomerulus and Bowman's capsule. This is where the blood is filtered, beginning the process of urine production. It is also called kidney corpuscles or malpighian corpuscles or renal corpuscles.

Bowman's capsule is a cup-like sac at the beginning of the tubular component of a nephron in the mammalian kidney that perform the first step in the filtration of blood to form urine. A glomerulus is inclosed in the sac. Fluid from blood in the glomerulus are collected in the bowman's capsule.

298. All the food item cause colour to the urine EXCEPT:-

- (a) Berry (b) Beets
(c) Carrot (d) Food colouring agents

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-III)

Ans : (c) **Urine** is a liquid or semisolid substance containing waste products of metabolism that are filtered from the body from the blood by the kidneys.

→ The usual color of urine is **yellow** which is caused by the presence of urobilin, a biochemical waste product generated from the breakdown of old red blood cells.

→ Abnormally colored urine may be cloudy, dark yellow or blood-colored.

→ Some food substance like **berry, beets, beans and food colouring agents** affect the color of the urine.

299. _____ is characterized by heavy proteinuria, hypoalbuminemia and edema.

- (a) Renal Failure
(b) Urinary Tract Infection
(c) Acute Glomerulonephritis
(d) Nephrotic Syndrome

ESIC Staff Nurse-2016 (01-03-2017 – Shift-I)

Ans : (d) **Nephrotic syndrome** is characterized by heavy proteinuria **hypoalbuminemia** and **edema**. It is a kidney disorder that causes in the urine. It is usually caused by **damage to the clusters** of small blood vessels in the kidneys that filter waste and **excess water from the blood**

300. Main product of protein metabolism is:-

- (a) Iodine (b) Urea
(c) Carbohydrate (d) Glycogen

CRPF Staff Nurse 2014

Ans : (b) Urea a natural product of nitrogen and protein metabolism and predominantly found in the urine and animal waste. It is the first organic compound artificially synthesized from inorganic starting materials. Urea or urea-containing mixtures are used as fertilizers in agricultures.

301. Granulomatous orchitis is the term applied for inflammation of

- (a) Lung (b) Ovary
(c) Testis (d) Omentum

BHU Nursing Officer Exam (22/09/2019)

Ans : (c) Granulomatous orchitis is a benign condition usually presented in middle aged men with painful enlargement of the testis. Grossly, it has described as a solid nodular enlargement of the testis. Microscopically it is characterized by noncaseating granulomas centered in the seminiferous tubules.

302. The involuntary loss of urine through an intact urethra as a result of sudden increase in the intra-abdominal pressure is called:-

- (a) Overflow incontinence
(b) Reflex incontinence
(c) Stress incontinence
(d) Urge incontinence

AIIMS Raipur Nursing Officer Main Aug-2019

Ans : (c) Stress incontinence happens when physical movement or activity-such as coughing, laughing sneezing running or heavy lifting puts pressure (stress) on your bladder causing you to leak urine. Stress incontinence is not related to psychological stress.

303. The principle of hemodialysis in which the water is moving under high pressure to an area of lower pressure is:-

- (a) Ultrafiltration (b) Osmosis
(c) Diffusion (d) Perfusion

AIIMS Raipur Nursing Officer Main Aug-2019

Ans : (a) In hemodialysis, fluid is removed by ultrafiltration using the dialysis membrane. The pressure on the dialysate side is lower so water moves from the blood (place of higher pressure) to the dialysate (place of lower pressure). This is how the hemodialysis treatment removes fluid.

304. The primary purpose of administering corticosteroids to the child with nephrotic syndrome is

- (a) To increase blood pressure
(b) To decrease proteinuria
(c) To prevent infection
(d) To reduce inflammation

RRB Staff Nurse Exam – 21/07/2019 (Shift-II)

Ans : (b) Nephrotic syndrome is a condition where the kidneys leak protein from the blood into the urine. Untreated children can suffer from serious infections. In most children with nephrotic syndrome this protein leak resolves with corticosteroid drugs (prednisone, prednisolone) reducing the risk of serious infection.

305. What is the renal threshold value of glucose?

- (a) 182 Mg/dl (b) 188 Mg/dl
(c) 185 Mg/dl (d) 180 Mg/dl

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans : (d) The plasma glucose concentration above while significant glucosuria occurs is called the renal threshold for glucose. It's value is variable, and deviations occur both above and below the commonly accepted 'normal' threshold of 180mg/dl. In diabetic patients, the value is reported to vary from 54 to 300 mg/dl.

306. Where is kidney located?

- (a) Oesophagus (b) Aorta
(c) Urethra (d) Abdomen

RRB Staff Nurse Exam – 20/07/2019 (Shift-III)

Ans : (d) The kidney are bean-shaped organs located in the upper retroperitoneal region of the abdomen. That is, they are located behind the smooth peritoneal lining of the upper part of the abdominal cavity, between it and the posterior body wall. Therefore, they are actually outside the peritoneal cavity. The kidneys are situated below the diaphragm, one on either side of the spine.

(v) Nervous system

307. Which function is transmission of sound vibrations to the internal ear?

- (a) Auricle
(b) Tympanic membrane
(c) Vestibule
(d) Eustachian tube

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans:(b) Tympanic membrane collects the sound waves and channels them into the ear canal (external auditory meatus), where the sound is amplified. The sound waves then travel towards a flexible, oval membrane at the end of the ear canal called the eardrum or tympanic membrane. Such waves cause the eardrum to vibrate.

308. The normal IQ level of human beings is ____

- (a) 80–100 (b) 120–Above
(c) 110–120 (d) 90–100

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans : (d) An intelligence quotient (IQ) is a total score derived from a set of standardized tests or substances designed to assess human intelligence.

IQ Range	IQ classification
Above 140	– 'Near' genius or genius
120–140	– Very superior intelligence
110–120	– Superior intelligence
90–110	– Normal or average intelligence
85–89	– Low average
70–79	– Border line

309. In spinal cord myelin sheath is formed by

- (a) Schwann cells (b) Oligodendrocytes
(c) Osteocytes (d) Microgela

DSSSB Staff Nurse Exam-2017 (Shift-I)

Ans : (a) In spinal cord myelin sheath is formed by Schwann cells. The myelin sheath is the protective, fatty white coating surrounding the axon of some nerve cells or nerve fibers, forming an electrically insulating layers. The production of myelin sheath is called myelination or myelinogenesis. It enables the electrical impulses between nerve cells to travel back and rapidly.

310. Audible range of human ear is-

- (a) 20–20000 (b) 50–5000
(c) 20–2000 (d) 200–20000

[ESIC Staff Nurse Exam I - 2016]

Ans. (a) The audible range of human hearing is **20 to 20000 Hz**. The SI unit of frequency is the **Hertz (Hz)**. Gradual loss of sensitivity to higher frequencies with age is normal.

311. One function of parasympathetic nervous system is :

- (a) Stimulating of sweat gland
(b) Constriction of pupil
(c) Contraction of hair muscles
(d) Acceleration of heart beat

AIIMS Nagpur Nursing Officer (28/02/2020)

Ans. (b) : The parasympathetic nervous system or PSNS is a part of the nervous system. The nervous system sends signals to and from different parts of the body. The PSNS is responsible for all the activities that take place when the body is at rest. During a period of flight and fight, the pupils dilate to allow us to see more clearly and make faster decisions. During rest and digest, the PSNS causes the pupils to constrict. So, the correct option is 'constriction of pupil'.

312. Which cranial nerves has the highest number of branches?

- (a) Vagus nerve (b) Facial nerve
(c) Trigeminal nerve (d) None of these

CRPF Staff Nurse 2014

Ans : (a) The vagus nerve has the highest number of branches. It is the longest cranial nerve. It contains motor and sensory fibres and because it passes through the neck and thorax to the abdomen has the widest distribution in the body.

313. High rays entering the eye is controlled by

- (a) Pupil (b) Iris
(c) Cornea (d) Lens

CRPF Staff Nurse 2014

Ans: (a) Pupil is the opening which controls the amounts of light entering in eye. When light intensity is high it decrease in size and when light intensity is low it dilates to allow more light in the eye to make eye enable to see the object.

314. Which is a branch of posterior cord of brachial plexus?

- (a) Medial cutaneous nerve of arm
(b) Musculocutaneous
(c) Thoracodorsal
(d) Lateral pectoral
(e) Ulnar

CGPSC Nursing Officer 2015

Ans. (c) : The branches of posterior cord of brachial plexus include, upper subscapular, thoracodorsal, lower subscapular, axillary and radial nerve.

315. The anterior end of the corpus callosum is known as

- (a) The trunk (b) The genu
(c) The rostrum (d) The splenium

Kerala (PSC) Staff Nurse (9/07/2021)

Ans. (b) : The anterior end of the corpus callosum is named the genu and is bent downward and backward in front of the septum pellucidum, diminishing rapidly in thickness. It is prolonged backward under the name of the rostrum.

316. Which is the largest branch of brachial plexus?

- (a) Medial nerve (b) Ulnar nerve
(c) Radial nerve (d) Axillary nerve

Kerala (PSC) Staff Nurse (9/07/2021)

Ans. (c) : The brachial plexus is a network of nerves that gives rise to all the motor and sensory nerves of the upper extremity. This plexus arises from the anterior rami of spinal nerves C5-T1 that undergo several mergers and splits into trunks and divisions, until they finally give rise to their divisions their terminal branches.

Radial nerve is the largest branch of brachial plexus. The radial nerve is the second terminal branch of the posterior cord of the brachial plexus, that contains fibers of spinal nerves C5-T1.

317. What is the origin of the serotonin pathways in the brain stem?

- (a) Ventral tegmental area
(b) Substantia niagra
(c) Raphe nuclei
(d) Gracile fasciculus

Kerala (PSC) Staff Nurse (9/07/2021)

Ans. (c) : The raphe nuclei is considered to be part of the reticular formation and is located in the brainstem. It is responsible for the release of selective serotonin reuptake inhibitor (SSRI) drugs, for example are thought to act on the raphe nucleus.

318. Thickest nerve in our body :

- (a) Sciatic nerve (b) Radial nerve
(c) Median nerve (d) Axillary nerve

Kerala Staff Nurse (28/01/2016)

Ans. (a) : The sciatic nerve is the largest and thickest nerve in the human body originating at the base of the spine and running along the back of each leg into the foot. At its thickest point it is about as wide as an adult thumb.

319. Length of spinal cord :

- (a) 25 cm (b) 35 cm
(c) 45 cm (d) 55 cm

Kerala Staff Nurse (28/01/2016)

Ans. (c) : The length of spinal cord is 40 to 50 cm long and 1 cm to 1.5 cm in diameter. Two consecutive rows of nerve roots emerge on each of its sides. These nerve roots join distally to 31 pairs of spinal nerves.

- 320. Broca's area is located in :**
 (a) Temporal lobe (b) Parietal lobe
 (c) Occipital lobe (d) Frontal lobe
Kerala Staff Nurse (28/01/2016)

Ans. (d) : Broca's area, located in the frontal lobe, is a key component of a complex speech network, by interacting with the flow of sensory information from the temporal cortex, devising a plan for speaking and passing that plan along to the motor cortex which controls the movements of the mouth.

- 321. The system that is responsible for all the sensations of the body is called**
 (a) Skeletal system
 (b) Gastro intestinal system
 (c) Nervous system
 (d) Excretory system
UPNHM Staff Nurse -24/01/2021 (Shift-II)

Ans. (c) : The nervous system found in humans coordinates and controls all kinds of activities. The Brain and Spinal cord are the Central Nervous system. Nerves and Sensory organs make up the peripheral Nervous system.

- 322. Smallest of cranial nerves :**
 (a) Optic (b) Trochlear
 (c) Oculomotor (d) Abducens
Kerala Staff Nurse (28/01/2016)

Ans. (b) : The trochlear nerve is the smallest cranial nerve and fourth cranial nerve; a motor nerve, that supplies only superior oblique muscle of the eye. It has following traits :

- (1) Smallest cranial nerve in terms of axon
- (2) It has longest intra cranial route
- (3) Only nerve that exists the dorsal aspect of the brainstem.
- (4) It innervates the superior oblique muscle on the opposite side of its origin.

- 323. CSF is secreted by :**
 (a) Cerebral aqueduct (b) Foramen magnum
 (c) Foramen of luschka (d) Choroid plexus
Kerala Staff Nurse (28/01/2016)

Ans. (d) : Choroid plexus epithelial cells and cerebral capillaries secrete the CSF/ISF, which acts as the lymph fluid of the brain. Normally about 500 mL of CSF is produced daily and an equal amount is absorbed across the arachnoids granulations.

- 324. Silent area of the brain refers to :**
 (a) Frontal lobe (b) Temporal lobe
 (c) Cerebellum (d) Occipital lobe
Mizoram PSC Staff Nurse May 2019

Ans. (c) : The Cerebellum ("little brain") is a first sized portion of the brain located at the back of the head, below the temporal and occipital lobes and above the brain stem.

- 325. 'Movement of eyeballs' is the function of which of the following cranial n erves?**
 (a) Oculomotor (b) Olfactory
 (c) Optic (d) Accessory
AIIMS Bhopal Nursing Officer 23/05/2018 (Shift-I)

Ans. (a) : The oculomotor nerve is the third cranial nerve (CN III). It allows movement of the eye muscles, constriction of the pupil, focusing the eyes and the position of the upper eyelid. Cranial nerve-III works with other cranial nerve to control eye movements and support sensory functioning.

- 326. Which one of the following is the third cranial nerve?**
 (a) Oculomotor nerve (b) Optic nerve
 (c) Abducens nerve (d) Trochlear nerve
AIIMS Raipur Nursing Officer Main 2019

Ans. (a) : See the explanation of above question.

- 327. What is the normal intracranial pressure?**
 (a) 20-30 mm Hg, (b) 30-40 mm Hg,
 (c) 5-15 mm Hg, (d) 0-10 mm Hg,
AIIMS Raipur Nursing Officer Main 2019

Ans. (c) : In the horizontal position the normal intracranial pressure (ICP) in healthy adult was reported to be within the range 7– 15 mm Hg.

- 328. This nerve maintain hearing and balance :**
 (a) Vestibulocochlear (b) Vagus
 (c) Facial (d) Trochlear
AIIMS Raipur Nursing Officer Main Aug-2019

Ans. (a) : The Vestibulocochlear nerve, also known as eight cranial nerve, consists of the vestibular and cochlear nerves. The vestibular nerve is primarily responsible for maintaining body balance and eye movements, while the cochlear nerve is responsible for hearing.

The vagus nerve is the longest of the 12 cranial nerves. It is responsible for the regulation of internal organ functions, such as digestion, heart rate and respiratory rate, as well as vasomotor activity and certain reflex actions, such as coughing, sneezing, swallowing and vomiting.

- The trochlear nerve is the fourth cranial nerve (CN-IV) and one of the ocular motor nerves that controls eye movement.

- 329. The plexus that supply nerves to the skin and muscles of the upper limbs and some the chest muscles is:-**
 (a) Cervical plexus (b) Brachial plexus
 (c) Lumbar plexus (d) Sacral plexus
AIIMS Raipur Staff Nurse 2017 (Shift-I)

Ans. (b) : The brachial plexus supplies all of the cutaneous innervations of the upper limb, except for the area of the axilla (which is supplied by the Supraclavicular nerve) and the dorsal scapula area, which is supplied by cutaneous branches of the dorsal rami.

It originates from the ventral rami of C5 through T1 spinal nerves.

- Cervical plexus supplies the head, neck and shoulders.
- Lumbar plexus supplies the back, abdomen, groin, thighs, knees and calves.
- Sacral plexus supplies the pelvis, buttocks, genitals, thighs, calves and feet.

- 330. Normal cerebrospinal fluid (CSF) pressure is :**
 (a) 110-180 mm of H₂O
 (b) 180-300 mm of H₂O
 (c) 200-400 mm of H₂O
 (d) 5-10 mm of H₂O
CCRS Staff Nurse (28/05/2017)

Ans. (a) : Cerebrospinal fluid (CSF) collection is a test to look at the fluid that surrounds the brain and spinal cord. CSF acts as a cushion, protecting the brain and spine from injury.

Normal values typically range as follows. Pressure 70 to 180 mm H₂O. Appearance : clear, Colorless, CSF total protein 15 to 60 mg/100 ml.

331. Structures of the body that are responsible for conveying information/message around the body are called :

- (a) Lymphocyte (b) Alveoli
(c) Neurons (d) Nephrons

CCRS Staff Nurse (28/05/2017)

Ans. (c) : A special cell called a neuron is responsible for carrying these messages. There are about 100 billion neurons in the human brain. A neuron has three main parts, including a cell body, axon and dendrites, the cell body directs all activities of the neuron.

332. The part of the brain, which is responsible for the coordination of movement is

- (a) Brain stem (b) Cerebellum
(c) Thalamus (d) Hypothalamus

CCRS Staff Nurse (28/05/2017)

Ans. (b) : Cerebellum:- It is present at the back of the brain. It coordinates voluntary muscle movements and helps to maintain posture balance and equilibrium. It is smallest part of the brain that receives information from the sensory system

Brain stem- Regulation of heart beat, breathing, sleeping and eating.

Thalamus- Relaying sensory information from sense organs.

Hypothalamus- Controls your hormone system.

333. The junction through which neurons communicate with one to another is

- (a) Dendrite (b) Axon
(c) Synapse (d) Node of Ranvier

RPSC Staff Nurse 2007

Ans. (c) : Synapse also called neuronal junction, the site of transmission of electric nerve impulse between two nerve cells or between a neuron and a gland or muscle cell. A synaptic connection between a neuron and a muscle cell is called neuromuscular junction.

334. The junction at which an impulse travels from one neuron to another is called as :

- (a) Stimulus (b) Nerve message
(c) Synapse (d) Axon

AIIMS Nagpur Nursing Officer (28/02/2020)

Ans. (c) : See the explanation of above question.

335. Eating behavior is controlled by

- (a) Thyroid (b) Pancreas
(c) Hypothalamus (d) Adrenal glands

RPSC Staff Nurse 2007

Ans. (c) : The body's system for regulating food intake is coordinated by the hypothalamus, which is located under the midline of the brain, behind the eyes, within the hypothalamus are nerve cells that, when activated, produce the sensation of hunger.

336. All of the following are neurotransmitters except

- (a) Dopamine (b) GABA
(c) Serotonin (d) Troponin

Gujarat (COH) Staff Nurse (20/06/2021)

Ans. (d) : Troponin is not a neurotransmitter. Troponin is a protein found in striated (skeletal and cardiac) muscles.

- Dopamine is a type of neurotransmitter and hormone that plays a role in movement, memory and pleasurable reward and motivation.
- Gamma Aminobutyric Acid (GABA) is an amino acid that functions as the primary inhibitory neurotransmitter for the central nervous system (CNS).
- Serotonin is a monoamine neurotransmitter that play the role of mood stabilizer, digestion and sleep.

337. Which cranial nerve has the highest number of branches?

- (a) Vagus nerve (b) Trigeminal nerve
(c) Facial nerve (d) None of these

HPSSC Staff Nurse (05/08/2021)

Ans. (a) : The Vagus nerve (X) has the highest number of branches. It is the longest cranial nerve. It contains motor and sensory fibres, because it passes through the neck and thorax to the abdomen, has the widest distribution in the body. It contains somatic and visceral efferent fibres, as well as general and special visceral efferent fibres.

338. Which of the following statement is correct for node of Ranvier?

- (a) Neurilemma is discontinuous
(b) Myelin sheath is discontinuous
(c) Both neurilemma and myelin sheath are discontinuous
(d) Covered by myelin sheath

HPSSC Staff Nurse (05/08/2021)

Ans. (b) : Neurons are the chief functional units of the nervous system. An ordinary neuron has a soma or cyton, many dendron and a long thread, called as axon which is enclosed in a multilayered myelin sheath. The myelin sheath is interrupted at the spaces between Schwann cell to form gaps. These gaps are called nodes of Ranvier.

Neurilemma is the cytoplasmic sheath of schwann cells that is present around the myelin sheath of axon and it is continuous and present over the nodes of Ranvier.

339. The process of converting physical energy into nervous system activity is called:

- (a) receptor potential (b) transduction
(c) generator potential (d) kinesthesia

DSSSB Staff Nursing-30/08/2019 (Shift-I)

Ans : (b) Transduction is the process by which foreign DNA is introduced into a cell by a virus or viral vector. An example is the viral transfer of DNA from one bacterium to another and hence, an example of horizontal gene transfer. The process of converting physical energy into neural impulse is called transduction.

340. The temperature of eye irrigating solution should be at what degrees (in Fahrenheit)?

- (a) 98–100 (b) 120–104
(c) 90–94 (d) 110

DSSSB Staff Nursing–28/08/2019 (Shift-I)

Ans : (a) Irrigating solution should be approximately 98.6 F (body temperature).

341. In which of the following neural tube defects, there is a protrusion of meninges with spinal tissue and CSF?

- (a) Meningocele (b) Spine bifida occulta
(c) Myelocele (d) Meningomyelocele

DSSSB Staff Nurse – 27/08/2019 (Shift-III)

Ans. (d) : Myelomeningocele/Meningomyelocele also known as open spina bifida is the most severe type of a neural tube defect in which the bones of the spine do not completely form. This results in an incomplete spinal canal. This spinal cord and meninges protrude from the child's back. Meningocele is the simplest form of open neural tube defects containing cerebrospinal fluid (CSF), while without any neural tissue.

342. What are the characteristic findings with regards to CSF after a lumbar puncture is performed on a child who has bacterial meningitis?

- (a) CSF is cloudy, elevated neutrophils, elevated proteins, decreased glucose
(b) CSF is clear, decreased pressure, decreased proteins and increased glucose
(c) CSF is clear, decreased neutrophils, increased protein decreased glucose
(d) CSF is cloudy, increased pressure decreased proteins, increased glucose

DSSSB Staff Nurse – 27/08/2019 (Shift-III)

Ans. (a) : Examination of the cerebro spinal fluid (CSF) in patients with acute bacterial meningitis reveals the characteristics neutrophilic pleocytosis (cell count usually ranging from hundreds to a few thousands with >80% PMNs). In some (25 - 30%) cases of L monocytogenes meningitis, a lymphocytic predominance may occur. CSF is a clear, colorless liquid found in your brain and spinal cord. CSF removes waste products from the brain and helps your CNS work properly.

343. Which structures act as wires of a telephone in the body?

- (a) Muscles (b) Nerves
(c) Arteries (d) Veins

RRB Staff Nurse Exam – 21/07/2019 (Shift-I)

Ans : (b) The spinal cord receives the messages from body parts and transmits to the brain. It send the messages received from the brain to body parts. It is like a telephone exchange. The nerves are like the telephone wires which carry information to and from the brain and spinal cord to different parts of the body. These nerve fibers are covered by a substance called myelin.

344. Which cranial nerve is responsible for the sense of smell?

- (a) Optic (b) Olfactory
(c) Vestibulocochlear (d) Oculomotor

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (b) Olfactory cranial nerve is responsible for the sense of smell. The cranial nerves are 12 pairs of nerves that can be seen on the ventral bottom surface of the brain. Some nerves bring information from the sense organs to the brain, other cranial nerves control muscles & others are connected to glands or internal organs such as the heart and lungs.

345. The use of the sense of smell to gather data in physical examination is called:-

- (a) Auscultation (b) Olfaction
(c) Percussion (d) Palpation

AIIMS RAIPUR Staff Nurse Exam-2017 (Shift-II)

Ans : (b) Olfaction or the sense of smell is the special sense through which smells (or odors) are perceived. It occurs when an odor binds to a receptor within the nasal cavity transmitting a signal through the olfactory system. Olfaction is a major sense in animals. The detection of volatile chemical compounds is an important attribute for any animal to survive and reproduce in the natural environment.

346. Nerves which conveys special sensory information related to smell :

- (a) Oculomotor nerve (b) Optic nerve
(c) Olfactory nerve (d) Trochlear nerve

AIIMS Raipur Nursing Officer Main Aug-2019

Ans. (c) : See the explanation of above question.

347. Largest sense organ of human body is

- (a) Heart (b) Lungs
(c) Skin (d) Hands

UPNHM Staff Nurse –24/01/2021 (Shift-II)

Ans. (c) : Skin is the largest sense organ of the human body. The skin forms a protective barrier between the external environment and the internal organs. Humans are equipped with five sense organs viz. Eyes, Ears, Skin, Tongue and Nose.

348. Near-Sightedness is also known as _____.

- (a) Myopia (b) Presbyopia
(c) Hypermetropia (d) Cataract

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (a) Near- Sightedness is also known as myopia. Near sightedness (myopia) is a common vision condition in which you can see objects near to you clearly but objects farther away are blurry. It occurs when the shape of the eye causes light rays to bend (refract) incorrectly, focusing images in front of the retina instead of the retina. Treatments options include glasses, contact lenses and surgery such as LASIK.

349. Which is the protective membrane covering the brain and spinal cord?

- (a) Peritoneum (b) Meninges
(c) Pericardium (d) Pleura

RRB Staff Nurse Exam – 20/07/2019 (Shift-I)

Ans : (b) There are 3 layers of tissues called meninges that protect the brain and spinal cord. The delicate inner layer is the pia mater. The outer covering of tissue (called the dura mater) closely lines the inside of the

skull. The second layer is the arachnoids mater and the third layer, the pia mater, cover the surface of brain.

Membranes	Related organ
Peritoneum	Intestine
Meninges	Brain & spinal cord
Pericardium	Heart
Pleura	Lungs

350. Which of the following is an example of neurotransmitter-
- (a) Only Dopamine (b) Aqueous diffusion
(c) Only acetylcholine (d) All of these

RRB Staff Nurse Exam 2015

Ans. (d) Neurotransmitter is a chemical substance which is released at the end of a nerve fibre by the arrival of a nerve impulse and by diffusing across the synapse or junction, effects the transfer of the impulse to another nerve fiber, a muscle fiber or some other structure signaling by neurotransmitters allows impulses to be passed from one cell to the next throughout the nervous system ex-dopamine, acetylcholine

351. Which part of the brain maintains the body temperature-
- (a) Cerebrum (b) Cerebellum
(c) Hypothalamus (d) Hippocampus

BHU Staff Nurse. Exam 2015

Ans. (c) The Hypothalamus is a portion of the brain that contains a number of small nuclei with a variety of functions. One of the major functions of the hypothalamus is to **maintain homeostasis**, i.e. to keep the **human body in a stable constant condition**. It is also responsible for creating or **controlling many hormones** in the body. It works with the pituitary gland, which makes and sends other important hormones around the body.

352. Body temperature is regulated by :
- (a) Kidney (b) Lungs
(c) Heart (d) Hypothalamus

CCRS Staff Nurse (28/05/2017)

Ans. (d) : See the explanation of above question.

353. Which of the following structures is located just inferior to thalamus?
- (a) Medulla (b) Epithalamus
(c) Hypothalamus (d) Cerebellum

AIIMS Bhopal Nursing Officer 23/05/2018 (Shift-I)

Ans. (c) : See the explanation of above question.

354. Neurons that release acetylcholine are refer to as
- (a) Adrenergic (b) Cholinergic
(c) Preganglionic (d) None of the above

Ram Manohar Lohiya Hospital Staff Nurse-2011

Ans : (b) Neurons that release **acetylcholine** are refers to **cholinergic**. Found in most **animal tissues**, choline is a primary component of the neurotransmitter acetylcholine and functions with inositol as a basic constituent of **lecithin**.

355. Part of brain that helps in maintaining posture and equilibrium is:
- (a) Medulla (b) Cerebellum
(c) Cerebrum (d) Thalamus

Ram Manohar Lohiya Hospital Staff Nurse-2011

Ans : (b) Part of brain that helps in maintaining posture and equilibrium is **cerebellum**. It is also responsible for a number of functions including motor skills such as **balance, posture and coordination** and also assists people with eye movement and vision.

356. The nerve that help in the act of vision-

- (a) Olfactory (b) Facial
(c) Optic (d) Acoustic

RRB Staff Nurse Grade-II - 2012

Ans : (c) The nerve that help in the act of vision is called **optic nerve**. It is a **bundle of nerve fibers** located in the back of the eye. It is also called the **second cranial nerve or cranial nerve II**. The main functions of the optic nerve is to **transfer visual information from the retina to the vision centers of the brain via electrical impulses**.

357. Ear part which helps in maintaining balance-

- (a) Semicircular canals
(b) Tympanic membrane
(c) Cochlea
(d) Ossicles

RRB Staff Nurse Grade-II - 2012

Ans : (a) Ear part which helps in maintaining balance are semicircular canals. It is three fluid-filled bony channels in the inner ear. The semicircular canals or semicircular ducts are three semicircular interconnected tubes located in the innermost semicircular canals. They are situated at right angles to each other and provide information about orientation to the brain to help maintain balance.

358. Is involved in the central nervous system-

- (a) Brain (b) Spinal cord
(c) Brain and spinal cord (d) Only spinal cord

RRB Staff Nurse Grade-II - 2012

Ans : (c) Brain and spinal cord is involved in the **central nervous system (CNS)**. The CNS integrates the received information and co-ordinates and influences the activity of all parts of the body.

359. The meninges layer is-

- (a) of the brain and spinal cord
(b) of lungs
(c) of kidney
(d) of heart

RRB Staff Nurse Grade-II - 2012

Ans : (a) The **meninges layer** is of the brain and spinal cord. The meniges are the three membranes that envelop the brain and spinal cord. In mammals the meninges are the **dura mater, arachnoid mater** and the **pia mater**. The primary function of the mininges is to protect the central nervous system (CNS).

360. Which division of the nervous system initiates a response known as fight or flight?

- (a) The parasympathetic nervous system
(b) The sympathetic nervous system
(c) The somatic nervous system
(d) None of these

RRB Staff Nurse-2015 (08-02-2015)