VIDYASAGAR UNIVERSITY
MIDNAPORE

COMMON ENTRANCE TEST FOR PG ADMISSION, 2019

Question Booklet No. 2317426 Full Marks : 200

Subject: HUMAN PHYSIOLOGY **Question Booklet Series: A**

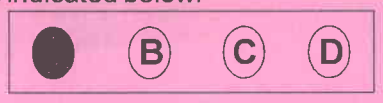
Subject Code No.: 23

Answer all the questions. Each question has the same weightage.

Read the following instructions carefully before you start answering.

INSTRUCTIONS

1. The question Booklet is printed in four Series e.g. (A), (B), (C) and (D). The candidate has to indicate the Series of the question booklet in the space provided in the OMR Answer Sheet . For example, if the candidate gets Series (A) booklet, he / she has to indicate on the front side of the OMR Answer Sheet with Black ink ball point pen only as indicated below:



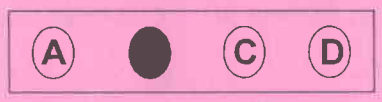
2. There are 50 questions inside this question booklet. Immediately after you have been instructed to open this question booklet, ensure that any page / question is not missing / not printed / torn /repeated. In case you find any defect anywhere in the question booklet, immediately get it replaced by the Invigilator.

3. Each question carries 4 marks. 1(one) mark will be deducted for each wrong answer(negative marking).

4. Write your Form No and put signature in the space provided.

5. Before answering, write down the necessary information on the OMR Answer Sheet as per your Application Form and Admit Card in the specific space provided.

6. With each question you will find 4 possible answers marked by the letters A, B, C & D. Read each question carefully and find out which answer, according to you, is correct / most appropriate / best. Indicate your answer by darkening the appropriate circle completely in the OMR Answer Sheet corresponding to the question. For marking answers, use black ink ball pen only. If 'B' is the correct answer in a case, mark as below:



7. Do not fold or make any stray marks on the OMR Answer Sheet.

8. You can use the blank space of the last page for rough work. Do not tear it off from the Question Booklet.

9. After the examination has been over, you must submit OMR Answer Sheet to the Invigilator.

10. OMR Answer Sheet is designed for computer evaluation. If you do not follow the instructions given above and shown in the OMR Answer Sheet, it may make evaluation by computer difficult. Any resultant loss to the candidate on the above account shall be of the candidate only.

11. No candidate shall be allowed to use Mobile phone. Log tables or Calculator of any description in the examination hall / room.

1. **Weber Fechner law deals with**
   (A) Frequency discrimination
   (B) Receptive field organisation
   (C) Intensity discrimination
   (D) Two point discrimination

2. **Generally cells with brief interphase and lacking G_0 phase**
   (A) are stem cells
   (B) do not exhibit cytokinesis
   (C) have brief life span
   (D) lack DNA polymerase

3. **Hemolysis may occur when a blood cell is placed in**
   (A) Hypertonic solution
   (B) Isotonic solution
   (C) Hypotonic solution
   (D) Salt solution

4. **The main control of the peripheral resistance occurs in the**
   (A) Arteriole (B) Artery (C) Venule (D) Capillary

5. **If the pancreatic duct is obstructed there will be elevated blood level of**
   (A) Bilirubin (B) Amylase (C) Secretin (D) Insulin

6. **The cells of the nervous system that support the neurons are**
   (A) Amyloid plaques (B) Fibroblasts (C) Leukocytes (D) Neuroglia

7. **The white fatty substance that coats axon to increase signal speed is**
   (A) Myelin (B) Microfibrils (C) Dendrites (D) Adipocytes

8. **Which of the following are not areas of the cerebrum**
   (A) Sensory signal receiving areas
   (B) Heart rate and breathing rate control areas
   (C) Logic and language areas
   (D) Motor signal generating areas

9. **The hypothalamus *does not* contain a control centre for the homeostatic regulation of**
   (A) Body temperature
   (B) Various emotional states
   (C) Urination
   (D) Eating

10. **The "*fight and flight*" response is the term used to describe activation of the**
    (A) Parasympathetic division
    (B) Sympathetic division
    (C) Somatic nervous system
    (D) CNS

11. **Damage of cerebellum causes**
    (A) Uncontrollable hunger
    (B) Coma
    (C) Loss of speech
    (D) Loss of balance

12. **The structure most greatly implicated in long term potentiation**
    (A) Hypothalamus (B) Hippocampus (C) Amgdala (D) Parahippocampal gyrus

13. **The acrosome region of a mature sperm cell contains:**
    (A) Peroxidase enzymes
    (B) Kinase enzymes
    (C) Hydrolytic enzymes
    (D) Oxidase enzymes

14. **During exercise, what form of heat transfer is most affected?**
    (A) Evaporation (B) Conduction (C) Convection (D) Radiation

15. **What may account for the gradual reduction in systolic pressure that occurs as steady state aerobic exercise continues?**
    (A) Increased sympathetic activation
    (B) Reduced cardiac output
    (C) Increased parasympathetic activation
    (D) Arteriolar vasodilation

16. **Studies of rat and humans have implicated which structure in spatial navigation and positional memory**
(A) Fusiform gyrus (B) Fornix (C) Hippocampus (D) Mammilary bodies

17. **During ordering of the letters, activation would most probably be seen in**
(A) Orbitofrontal PFC (B) Ventromedial PFC (C) Temporal lobe (D) Dorsolateral PFC

18. **Glyco-sphingolipids are combination of**
(A) Glycerol with two galactose residues
(B) Ceramide with one or more sugar residues
(C) Sphingosine with galactose and ceramide
(D) Sphingosine with glucose

19. **---------- is a protective covering of viral genome**
(A) Capsid (B) Envelope (C) Capsomere (D) Lipid layer

20. **Mumps is viral infection affecting**
(A) Ears (B) Tonsils (C) Parotid gland (D) Pharynx

21. **The MHC proteins of cells**
(A) Interact with helper T cells
(B) Activate and deactivate humoral immunity
(C) Regulate interferon production
(D) Display antigens of self and non-self origin

22. **MMR protects against which three infections?**
(A) Measles, malaria, rabies (B) Measles, mumps, rubella
(C) Measles, mumps, rabies (D) Measles, malaria, rubella

23. **HIV/AIDS is the cause of morbidity and mortality worldwide is**
(A) Outbreak (B) Epidemic (C) Endemic (D) Pandemic

24. **Rich source of Vitamin B is**
(A) Liver (B) fresh liver oils
(C) green leafy vegetables (D) egg yolk

25. **The main symptoms of irritable bowel syndrome are abdominal pain and**
(A) Blood in the stool (B) Change in bowel habits
(C) Inflammation (D) Passing of mucus

26. **Free fatty acids, monoglycerol and cholesterol are packaged into what in order to be absorbed via diffusion?**
(A) Chylomicrons (B) Mixed micelles
(C) Low density lipoproteins (D) Very low density lipoproteins

27. **The main physiological stimulus for vasopressin release is**
(A) Blood volume (B) Plasma osmolality (C) Blood pressure (D) Stroke volume

28. **Parallel fibers come from which of the following cells in the cerebellum :**
(A) Golgi (B) Granule (C) Basket (D) Purkinje

29. **During pregnancy, the uterine smooth muscle is quiescent. As a result, forceful uterine contractions do not occur until the ninth month of pregnancy. What explains the quiescence of uterine smooth muscle during gestation?**
(A) Oxytocin inhibits contraction of uterine smooth muscle
(B) Low levels of blood flow to uterine smooth muscle
(C) Prostaglandins such as prostaglandin E2 (PGE2) inhibit contraction of uterine smooth muscle
(D) High levels of progesterone suppress contractile activity of uterine smooth muscle

30. **Hormones that cause uterus to contract**
(A) FSH and LH
(B) Prolactin and Progesterone
(C) Estrogen and Progesterone
(D) Oxytocin and Prostaglandins

31. **The main function of the fimbrae of oviduct are to**
(A) help in collection of ovum after ovulation
(B) make necessary changes in the endometrium for implantation
(C) release ovum from Graffian follicle
(D) help in development of embroyo

32. **Which among the following is cell division without growth**
(A) Cleavage (B) Conjugation (C) Fertilization (D) Development

33. **Which hormone is the basis of pregnancy test**
(A) HCG (B) Prolactin (C) Estrogen (D) Prostaglandins

34. **What is the main reason of melting of ice sheets**
(A) Increase of oxygen content
(B) Global warming
(C) Decrease in carbondioxide content
(D) Noise pollution

35. **Which of the following is used in production of plastic**
(A) Mercury (B) Lead (C) Vinyl chloride (D) None of these

36. **Problem of solid waste disposal can be managed through**
(A) Recycling (B) Lesser pollution (C) Population control (D) Use of Timber

37. **The most serious environmental effect posed by hazardous waste is**
(A) Air Pollution
(B) Contamination of ground water
(C) Increased use of lands for landfills
(D) None of these

38. **The total magnification of a specimen viewed with a 10X eyepiece and 40X objective lens is**
(A) 30X (B) 400X (C) 4000X (D) 50X

39. **The arrangement of microtubules in eukaryotic flagella is referred to as**
(A) Undulating (B) Basal (C) 9+2 (D) Ciliary

40. **Which of the following is not characteristics of a prokaryote**
(A) DNA (B) Cell membrane (C) Cell wall (D) Endoplasmic reticulum

41. **α-D-glucose and β-D-glucose are**
(A) Stereoisomers (B) Epimers (C) Anomers (D) Keto-aldo pairs

42. **NMR spectroscopy is based on-**
(A) Absorption (B) Diffraction (C) Radiation (D) Emission

43. **ECT stands for** _____
(A) Electro cardio tomography
(B) Electro capacitive tomography
(C) Electro converging tomography
(D) Electro cornial tomography

44. **Property of exhibiting electric polarization when exposed to intense electric field is known as** _____
(A) Electromagnetic effect
(B) Ferromagnetic material
(C) Ferroelectric materials
(D) Piezoelectric materials

45. **Which of the following substances are most depleted after a day of fasting?**
(A) Amino acids (B) Fatty acids (C) Glycogen (D) Triglycerides

46. **Radioactive substance emits the following rays except-**
(A) Gamma rays (B) Alpha rays (C) Beta rays (D) X-rays

47. **The following are functions of connective tissue**
(A) Storing energy
(B) Providing a framework for the body
(C) Protection from the environment
(D) A and B

48. **The absolute refractory period refers to**
(A) The period during which the membrane is being depolarised to the threshold
(B) The process where effects of all graded potentials are integrated at the region of plasma membrane
(C) The period during which Na^+ channels are open or inactivated and no action potential is possible
(D) If a stimulus reaches threshold, then an action potential is always triggered

49. **Significant buffers for hydrogen ions generated in the body from anaerobic metabolism include all the following except-**
(A) extracellular bicarbonate
(B) plasma proteins
(C) plasma lactate
(D) inorganic phosphate

50. **Streptokinase causes**
(A) Colonization of a niche in the host
(B) Modulation of host immune responses
(C) Obtaining nutrition from the host
(D) Evasion of host defence barrier