



Aakash

Medical | IIT-JEE | Foundations

(Divisions of Aakash Educational Services Ltd.)

Regd. Office : Aakash Tower, Plot No.-4, Sec-11, MLU, Dwarka, New Delhi-110075

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MM : 160

Sample Paper : Campus Recruitment Test Zoology (Medical)

Time : 1½ Hr.

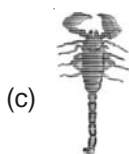
Complete Syllabus of Class XI & XII

Instructions:

- Use ball point pen only to darken the appropriate circle.
- Mark should be dark and should completely fill the circle.
- Dark only one circle for each entry.
- Dark the circle in the space provided only.
- Rough work must not be done on the Answer sheet and do not use **white-fluid** or any other **rubbing material** on Answer sheet.
- Each question carries 4 marks. For every wrong response 1 mark shall be deducted from the total score.

Choose the correct answer :

1. One amongst the following is not a feature of all the following animals given in the figure below.

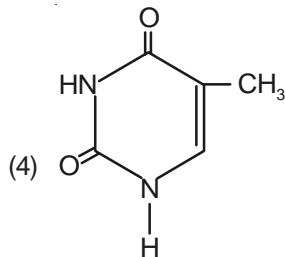
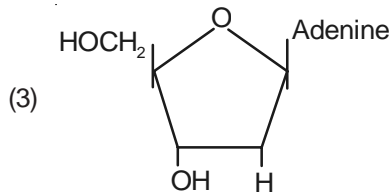
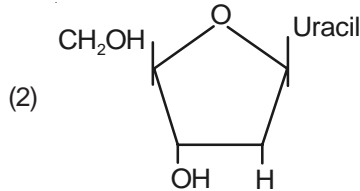
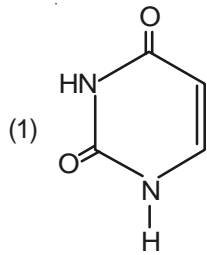


- They have jointed legs and abdomen
 - They show presence of statocysts and wings
 - They show presence of open circulatory system
 - They show presence of Arthroial membrane
2. Tissue that often serves as a support framework for epithelium
- Does not contain cells that secrete fibres
 - Is areolar tissue
 - Shows orientation of fibres in regular or irregular pattern
 - Also attaches skeletal muscles to bones and ligaments
3. The abdomen of male cockroach does not show
- Genital pouch bounded dorsally by 9th and 10th terga and ventrally by the 9th sternum
 - Presence of short thread like anal styles attached to 10th tergum
 - Presence of a pair of a jointed filamentous structures called anal cerci
 - Presence of ten segments
4. High partial pressure of CO₂, H⁺ concentration and temperature has least effect on
- Binding ability of oxygen with haemoglobin
 - Solubility of oxygen in plasma
 - Working of chemosensitive centre
 - Percentage saturation of haemoglobin with oxygen
5. The closing of semilunar valves does not coincide with
- Fall in ventricular pressure
 - Ventricular relaxation
 - Attempted backflow of blood into the atria from ventricles
 - Creation of dup sound

6. The pancreatic lipase with the help of bile breaks down fats into

- (1) Dipeptides
- (2) Diglycerides and monoglycerides
- (3) Fatty acids and glycerol
- (4) Derived lipids

7. The nucleotides of RNA contain all except one



8. Red muscles fibres are not characterised by

- (1) Plenty of mitochondria
- (2) High myoglobin content
- (3) Infatigability
- (4) More extensive sarcoplasmic reticulum

9. The regulation of sexual behaviour, expression of emotional reactions and motivation is the function of

- (1) Corpora quadrigemina
- (2) Basal ganglia
- (3) Limbic system
- (4) Cerebrum and hypothalamus

10. Damage of suspensory ligaments of eye will affect

- (1) Ability to see colours
- (2) Ability to absorb dazzling effect of light
- (3) Accommodation property of eye
- (4) The texture of lens

11. The cristae and maculae are collectively termed as

- (1) Chemoreceptors
- (2) Baroreceptors
- (3) Labyrinthine receptors
- (4) Teloreceptors

12. Spermiogenesis is the conversion of spermatids to spermatozoa for which all the given statements are correct except one? Mark the **exception**

- (1) Formation of acrosome by Golgi apparatus
- (2) Development of mitochondrial spiral around the upper part of axial filament
- (3) It takes place in association with Sertoli cells of testes
- (4) It becomes heavier in weight

13. In absence of which ovarian hormone in high content, the ovulation would be not possible

- (1) Leutenising hormone
- (2) Oestrogen
- (3) Inhibin
- (4) Gonadotropins

14. Mark the hormone which forms two peaks during menstrual cycle.

- (1) Estrogen
- (2) Progesterone
- (3) FSH
- (4) LH

15. A sexually transmitted disease caused by a protozoan, characterised by foul smelling vaginitis with yellowish discharge in females and treated by administration of metronidazole is

- (1) Chlamydia
- (2) Chancroid
- (3) Trichomoniasis
- (4) Gonorrhoea

16. Mark the odd one

- (1) *Lemur* and *Spotted cuscus*
- (2) *Flying squirrel* and *flying Phalanger*
- (3) *Koala* and *Bandicoot*
- (4) *Wolf* and *Tasmanian wolf*

17. Dinosaurs are the extinct descendants of the _____ preceded by _____ .
- (1) Therapsids, synapsids
 - (2) Thecodonts, sauropsids
 - (3) Pelycosaurs, early reptiles
 - (4) Pterosaurs, pelycosaurs
18. Malignant malaria considered to be most serious one and can be fatal caused by
- (1) *Plasmodium vivax*
 - (2) *Plasmodium falciparum*
 - (3) *Plasmodium ovale*
 - (4) *Plasmodium malavia*
19. *Trichophyton* infection is characterised by
- (1) Appearance of dry, scaly lesions on various parts of the body
 - (2) Chronic inflammation of the lymphatic vessels of the lower limbs
 - (3) Internal bleeding, muscular pain, fever, anaemia and blockage of the intestinal passage
 - (4) Constipation, abdominal pain and contamination of stools with mucus and blood clots
20. Acid in the stomach, saliva in the mouth, tears from eyes all are examples of
- (1) Cellular barriers
 - (2) Physiological barriers
 - (3) Physical barriers
 - (4) Cytokine barriers
21. The heavy chains and light chains of an antibody molecule are linked with each other through
- (1) Peptide bonds
 - (2) Disulphide bonds
 - (3) Glycosidic bonds
 - (4) Phosphodiester bonds
22. Humoral immune response of body
- (1) Deals with cellular immune response
 - (2) Is stimulated by T-cells
 - (3) Is mainly responsible for Graft rejection
 - (4) Promotes the increased activity of neutrophils
23. Type of antibody that remains attached to mucus membranes of body is
- (1) IgA
 - (2) IgM
 - (3) IgD
 - (4) IgG
24. One amongst the following is not a second generation vaccine
- (1) Hepatitis B vaccine
 - (2) FMD vaccine
 - (3) Herpes vaccine
 - (4) Diphtheria vaccine
25. Mark the correct combination of drugs which quickly reduce the symptoms of allergy
- (1) Histamine, Serotonin, Heparin
 - (2) Antihistamine, adrenaline, steroids
 - (3) Adrenaline, noradrenaline, histamine
 - (4) Interferon, adrenaline, steroids
26. Mark the non-harmful technique to diagnose the cancer of internal organs
- (1) Radiography
 - (2) Computed tomography
 - (3) Histopathological studies
 - (4) Magnetic resonance imaging
27. A patient with severe burn injuries when brought to the hospital will be most probably injected with _____ as a first aid.
- (1) LSD
 - (2) Morphine
 - (3) Atropine
 - (4) Cocaine
28. The importance of gas bubbles in sparged tank reactor is that
- (1) Gas bubbles are meant for sterilisation of the culture
 - (2) Bubbles dramatically increase the oxygen transfer area
 - (3) Bubbles help in purification of culture
 - (4) Bubbles help in easy release of product from sampling port
29. In the maturation of proinsulin to insulin after removal of C peptide. A and B chain are linked by
- (1) Hydrogen bond
 - (2) Disulphide bond
 - (3) Ionic bond
 - (4) Electrostatic force
30. Ti plasmid of *Agrobacterium tumefaciens* has been modified into cloning vector because now it is
- (1) Non-pathogenic to plants
 - (2) Still able to use the mechanisms to deliver genes of our interest in variety of plants
 - (3) Pathogenic to plant
 - (4) Both (1) & (2)

31. Choose the wrong match
- (1) Pigments — Carotenoids, anthocyanins etc
 - (2) Lectins — Morphine, codein
 - (3) Polymeric — Rubber, gums, cellulose substances
 - (4) Toxins — Abrin, Ricin
32. Mark the statement that is incorrect for loop of Henle
- (1) It plays a very important role in the maintenance of high osmolarity of medullary interstitium
 - (2) Its ascending limb is impermeable to water and electrolytes
 - (3) Loop of Henle is longer in juxtamedullary nephrons
 - (4) This region is known for minimum reabsorption of water
33. The mode of transport of urea from collecting duct to interstitium is
- (1) Active transport
 - (2) Facilitated transport
 - (3) Passive transport
 - (4) Sometimes active and sometimes passive transport
34. Mark the **correct** statements w.r.t. human evolution
- (1) During ice age between 75,000 – 10,000 years ago *Homo-erectus* arose
 - (2) The cranial capacity of *Homo-habilis* was 650-800 cc
 - (3) Pre-historic cave art developed about 10,000 years back
 - (4) The Neanderthal man had a brain size of 900 cc
35. Change of frequency of alleles in a population would be expected in a population if it
- (1) Shows no genetic drift
 - (2) Shows no recombination
 - (3) Is evolving
 - (4) Shows no gene flow
36. Use of IUDs within 72 hours of coitus, as emergency contraceptive is mainly aimed at
- (1) Preventing sperm ascent
 - (2) Preventing mating of sperm and ovum
 - (3) Preventing implantation
 - (4) Killing of sperms
37. To increase their contraceptive efficiency the use of spermicidal creams, jellies and foams is done along with
- (1) IUDs
 - (2) Diaphragms, cervical caps and vaults
 - (3) Pills
 - (4) Implants
38. Periodic abstinence a natural method of contraception aims at
- (1) Preventing ovulation
 - (2) Preventing approximation of gametes
 - (3) Killing of male gametes
 - (4) Impairing sperm ascent
39. Increased level of thyroxine in maternal blood during pregnancy
- (1) Is responsible for maintaining corpus luteum
 - (2) Ensures normal mental development of foetus
 - (3) Promotes maturity of gonads of foetus
 - (4) Promotes rise in blood sugar level of mother
40. The signals for parturition originate from the _____ A _____ and _____ B _____, which induce mild uterine contraction called foetal ejection reflex.
- | A | B |
|-----------------------------|----------|
| (1) Mother uterus | Placenta |
| (2) Fully developed foetus | Placenta |
| (3) Partly developed foetus | Decidua |
| (4) Partly developed foetus | Yolk sac |





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1. (2)	11. (3)	21. (2)	31. (2)
2. (2)	12. (4)	22. (2)	32. (2)
3. (2)	13. (2)	23. (1)	33. (3)
4. (2)	14. (1)	24. (4)	34. (2)
5. (3)	15. (3)	25. (2)	35. (3)
6. (2)	16. (3)	26. (4)	36. (3)
7. (4)	17. (2)	27. (2)	37. (2)
8. (4)	18. (2)	28. (2)	38. (2)
9. (3)	19. (1)	29. (2)	39. (2)
10. (3)	20. (2)	30. (4)	40. (2)