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FOR KUET EXAM PREPARATION

KUET 2021 Question Paper · M.Sc. Zoology

EXAM	YEAR	TYPE	SUBJECT
KUET	2021	Question Paper	M.Sc. Zoology

Sr. No. .....

ENTRANCE TEST-2021

SCHOOL OF BIOLOGICAL SCIENCES

ZOOLOGY

Question Booklet Series **A**

Total Questions : 60
Time Allowed : 70 Minutes

Roll No. : | | | | | | |

Instructions for Candidates :

1. Write your Entrance Test Roll Number in the space provided at the top of this page of Question Booklet and fill up the necessary information in the spaces provided on the OMR Answer Sheet.
2. OMR Answer Sheet has an Original Copy and a Candidate's Copy glued beneath it at the top. While making entries in the Original Copy, candidate should ensure that the two copies are aligned properly so that the entries made in the Original Copy against each item are exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, including answers to questions, are to be recorded in the Original Copy only.
4. Choose the correct / most appropriate response for each question among the options A, B, C and D and darken the circle of the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.
5. Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.
6. Do not darken more than one circle of options for any question. A question with more than one darkened response shall be considered wrong.
7. There will be **'Negative Marking'** for wrong answers. Each wrong answer will lead to the deduction of 0.25 marks from the total score of the candidate.
8. Only those candidates who would obtain positive score in Entrance Test Examination shall be eligible for admission.
9. Do not make any stray mark on the OMR sheet.
10. Calculators and mobiles shall not be permitted inside the examination hall.
11. Rough work, if any, should be done on the blank sheets provided with the question booklet.
12. OMR Answer Sheet must be handled carefully and it should not be folded or mutilated in which case it will not be evaluated.
13. Ensure that your OMR Answer Sheet has been signed by the Invigilator and the candidate himself/herself.
14. At the end of the examination, hand over the OMR Answer Sheet to the invigilator who will first tear off the original OMR sheet in presence of the Candidate and hand over the Candidate's Copy to the candidate.

SS-5440–A 1 **[Turn over**

1. Change in the shape of sporozoans is as a result of :

   (A) Pellicle

   (B) Plasmalemma

   (C) All of the above

   (D) None

2. The cells responsible for regeneration in sponges are :

   (A) Chromocytes

   (B) Amoebocytes

   (C) Archaeocytes

   (D) Myocytes

3. Medusoid phase is altogether absent in :

   (A) Scyphozoa

   (B) Hydrozoa

   (C) Actinozoa

   (D) Heliozoa

4. All flat worms differ from all round worms in having :

   (A) Triploblastic body

   (B) Solid mesoderm

   (C) Bilateral symmetry

   (D) Metamorphosis in the life-cycle

5. Which one of the following is not a characteristic of phylum Annelida ?

   (A) Pseudocoelom

   (B) Ventral nervecord

   (C) Closed circulatory system

   (D) Segmentation

6. Bilateral symmetry, metameric segmentation, coelom and open circulatory system are characteristic of phylum :

   (A) Annelida

   (B) Mollusca

   (C) Arthropoda

   (D) Echinodermata

7. Sea-foam is :

   (A) Shell of nautilus

   (B) Internal shell of cuttle fish

   (C) Cartilage of octopus

   (D) All of the above

8. Sea lilies are :

   (A) Echinoderms

   (B) Coelentrates

   (C) Rotifers

   (D) Aquatic plants

9. The name Herdmania was proposed by :

   (A) Herdman

   (B) Lahille

   (C) Weiss and Boveri

   (D) Aristotle

10. Scales in cyclostomata are :

    (A) Cycloid

    (B) Ctenoid

    (C) Placoid

    (D) None of the above

11. In addition to scales, bony plates or scutes are found in :

(A) Hag fish

(B) Eel

(C) Flying fish

(D) Sea horse

12. Elasmobranchs are different from teleosts in :

(A) Having accessory respiratory organs

(B) Absence of clasper in males

(C) Absence of internal ear

(D) Absence of air bladder

13. Which urodela (caudata) shows parental care by carrying a gelatinous egg mass round her neck ?

(A) Amphiuma

(B) Triton

(C) Desmognathus

(D) Keyeserlingi

14. Neurotoxic venom is produced by all except :

(A) Naja naja (Cobra)

(B) Bongarus (Krait)

(C) Vipera (Viper)

(D) Hydrophis (Sea snake)

15. In which super order of class aves are the four limbs modified into flippers, feathers small scale like and have a thick layer of fat beneath the skin ?

(A) Palaeognathae

(B) Odontognathae

(C) Impennae

(D) Neognathae

16. One of the following is a very unique feature of mammalian body :

(A) Homeothermy

(B) Presence of diaphragm

(C) Four chambered heart

(D) Rib cage

17. Which of the following are derived from the dermis ?

(A) Scales

(B) Feathers

(C) Nails

(D) Mammary glands

18. Bunodont teeth are associated with :

(A) Man

(B) Monkey

(C) Both (A) and (B)

(D) Dog

19. Alveoli of mammalian lung are lined by :

(A) Simple cuboidal epithelium

(B) Ciliated epithelium

(C) Columnar epithelium

(D) Simple squamous epithelium

20. True internal gills are absent in :

(A) Elasmobranch

(B) Teleosti

(C) Dipnoi

(D) Tetrapoda

21. The ventricles of the brain are filled with :

(A) Brain fluid

(B) Cerebro-spinal fluid

(C) Blood

(D) Lymph

22. Arrange the meninges from inside :

(A) Dura, Arachnoid, Pia

(B) Pia, Arachnoid, Dura

(C) Dura, Pia, Arachnoid

(D) Pia, Dura, Arachnoid

23. Tri-lobed kidney is found in :

(A) Rabbit

(B) Man

(C) Frog

(D) All

24. Absence of right systemic arch is characteristic of :

(A) Mammals

(B) Aves

(C) Reptiles

(D) None of the above

25. Identify the animal in which cross fertilization is mandatory through hermaphrodite :

(A) Pheretima

(B) Crocodiles

(C) Cockroach

(D) Turtle

26. Mosaic development and unequal cleavage is seen in :

(A) Chimpanzee

(B) Rabbit

(C) Humans

(D) Frog

27. Extra-embryonic membranes are absent in :

(A) Prototherians

(B) Metatherians

(C) Eutherians

(D) Amphibians

28. In humans the beginning of embryonic stage occurs in :

(A) First week

(B) Third week

(C) Sixth week

(D) Second trimister

29. Re-absorption of useful substances back into the blood from the filtrate in a nephron occurs mainly in :

(A) Proximal convoluted tubule

(B) Loop of henle

(C) Distant convoluted tubule

(D) Collecting duct

30. Which of the following converts peptones, proteoses and poly-peptides into amino acids :

(A) Amylase

(B) Trypsin

(C) Lipase

(D) Rennin

31. Function of the tracheal hairs is to :

(A) Pass mucus out

(B) Pass mucus in

(C) Pass air out

(D) Pass air in

32. Trimethyl amine oxide is excreted by :

(A) Marine fishes

(B) Fresh water fishes

(C) Reptiles

(D) Birds

33. When the S.A node does not initiate any impulse for heart beat it results in :

(A) Heart failure

(B) Heart block

(C) Circulatory arrest

(D) Circulatory shock

34. When the neuron is at rest :

(A) The inner surface of the cell membrane is negatively charged

(B) There are more sodium ions outside the cell than within

(C) Both (A) and (B)

(D) None of the above

35. Perception of sound in a mammal is by stimulation of mechano-receptors located in :

(A) Reissners membrane

(B) Sacculus

(C) Semi circular canals

(D) Organ of Corti

36. Pupil is dilated by :

(A) Contraction of circular muscles

(B) Contraction of radial muscles

(C) Both (A) and (B)

(D) None

37. LH helps in :

(A) Formation of ovum

(B) Release of ripe ovum

(C) Menstrual bleeding

(D) None of the above

38. Calcitonin which helps in reducing the levels of blood calcium is produced by :

(A) Adrenal gland

(B) Pancreas

(C) Thyroid gland

(D) Pituitary gland

39. Deficiency of thyroxin in children leads to :

(A) Creatinism

(B) Myxodema

(C) Tetany

(D) Acromegaly

40. Oxytocin and vasopresin are released by :

(A) Pars-distalis

(B) Pars-intermedia

(C) Pars-nervosa

(D) None of the above

41. The enzymes responsible for promoting gluconeogenesis are :

(A) Insulin, Cortisol and Thyroxine

(B) Cortisol, Insulin and Glucagon

(C) Cortisol, Glucagon and Thyroxine

(D) Insulin, Thyroxine and Glucagon

42. Deamination results in formation of uric acid in presence of :

(A) Arginase

(B) Xanthine oxidase

(C) Both

(D) None

43. Which of the following is the first step in Krebs cycle ?

(A) Acetyl CoA + Oxaloacetic acid $\rightarrow$ Citric acid

(B) Cis-aconitic acid + $H_2O \rightarrow$ Isocitric acid

(C) Fumaric acid + $H_2O \rightarrow$ Malic acid

(D) Succinic acid $\rightarrow$ 2H + Fumeric acid

44. Reactions of urea cycle takes place in the liver cell in :

(A) Cytosol

(B) Lysosomes only

(C) Mitochondrial matrix

(D) Both Cytosol and mitochondrial matrix

45. Determination of sex of a child depends upon :

(A) Nature of sperm

(B) Nature of egg

(C) Health of father

(D) Age of mother

46. Following Mendels Laws F2 progeny shows phenotypic ratio of 27:9:9:9:3:3:3:1 in a cross called :

(A) Monohybrid cross

(B) Dihybrid cross

(C) Trihybrid cross

(D) None of the above

47. Foetal sex can be determined by examining cells from amniotic fluid by looking for :

(A) Kinetochore

(B) Chiasmata

(C) Barrbody

(D) Autosomes

48. Which of the following is sex-linked inheritance ?

(A) Perinicious anemia

(B) Cretinism

(C) Night blindness

(D) Color blindness

49. Trasversion mutation means :

(A) Adenine is substituted by guanine

(B) Thyamine is substituted by cytosine

(C) Purine is substituted by pyrimidine

(D) None of the above

50. Male honey bees have :

(A) Haploid chromosomes

(B) Diploid chromosomes

(C) Triploid chromosomes

(D) All of the above

51. Chromosomal numbers in Edwards syndrome are :
    (A) Addition of a single chromosome on 21st pair
    (B) Addition of a single chromosome on 18th pair
    (C) Addition of a single chromosome on 13th pair
    (D) Addition of a single chromosome on 15th pair

52. Okazaki fragments are joined together by :
    (A) DNA topoisomerase I
    (B) DNA topoisomerase II
    (C) Both (A) and (B)
    (D) None of the above

53. Darwin's theory of natural selection to explain organic evolution was based on :
    (A) Modifications in the organs through use and disuse
    (B) Prodigality of reproduction, struggle for existence and survival of the fittest
    (C) Inheritance of acquired characters
    (D) Appearance of sudden large variations, their inheritance and survival of those having these variations

54. Industrial melanism illustrates the phenomenon of :
    (A) Directional selection
    (B) Concealing coloration
    (C) Both (A) and (B)
    (D) None of the above

55. The type of fossil where hard parts like bone or trunks of the trees are preserved are known as :
    (A) Petrification
    (B) Moulds
    (C) Compression
    (D) Pseudofossil

56. Origin of the first toothed birds took place in :
    (A) Cretaceous period
    (B) Triassic period
    (C) Jurassic period
    (D) Permian period

57. Two species are called sibling species if they are :
    (A) Morphologically distinct but inter breeding
    (B) Morphologically similar but reproductively isolated
    (C) Morphologically similar and inter breeding
    (D) Morphologically distinct and reproductively isolated

58. Macro evolution operates above species level and results in the establishment of :
    (A) New genera
    (B) New families
    (C) New orders
    (D) All of the above

59. Evolution of Darwin's finches is an example of :
    (A) Adoptive radiation
    (B) Allopatric speciation
    (C) Both (A) and (B)
    (D) None of the above

60. The term speciation was coined by :
    (A) Mayr
    (B) A.R. Wallace
    (C) Linnaeus
    (D) Malths

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