

Code No.

J – 2264

**Entrance Examination for Admission to the P.G. Courses in the Teaching
Departments, 2020**

CSS

**ZOOLOGY (PURE & APPLIED)/AQUATIC BIOLOGY AND FISHERIES/
INTEGRATIVE BIOLOGY**

General Instructions

1. The Question Paper is having two Parts — Part 'A' Objective type (60%) & Part 'B' Descriptive type (40%).
2. Objective type questions which carry 1 mark each are to be (✓) 'tick marked' in the response sheets against the appropriate answers provided.
3. 8 questions are to be answered out of 12 questions carrying 5 marks each in Part 'B'.
4. **Negative marking** : 0.25 marks will be deducted for each wrong answer in Part 'A'.

Time : 2 Hours**Max. Marks : 100**

To be filled in by the Candidate

Register Number	in Figures								
	in words								

PART – A
(Objective Type)

Choose appropriate answer from the options in the questions. **One mark each.**

(60 × 1 = 60 marks)

1. Trochophore larva is found in

a) Annelida and Mollusca	b) Annelida and Porifera
c) Coelenterata and Annelida	d) Mollusca and Coelenterata

DO NOT WRITE HERE

2. The larval stage of *Sycon* is

- | | |
|------------------|------------------|
| a) Amphiblastula | b) Amphimixis |
| c) Amphistoma | d) Amphiglastula |

3. Infective stage of *Plasmodium vivax* in human is

- | | |
|---------------|----------------|
| a) Sporozoite | b) Trophozoite |
| c) Merozoite | d) Cryptozoite |

4. *Cucumaria* belongs to the class
- a) Echinoidea
 - b) Holothuroidea
 - c) Crinoidea
 - d) Ophiuroidea
5. *Peripatus* belongs to the phylum
- a) Arthropoda
 - b) Annelida
 - c) Onychophora
 - d) Branchiopoda
6. Which one of the following is a pest of paddy?
- a) *Leptocorisa oratoria*
 - b) Oryctes
 - c) *Eriophyes*
 - d) Locust
7. True Coelom is absent in
- a) Annelida
 - b) Nematoda
 - c) Echinodermata
 - d) Mollusca
8. *Limulus* belongs to the class
- a) Merostomata
 - b) Insecta
 - c) Crustacea
 - d) Onacophora
9. Flame cells are associated with
- a) Respiration
 - b) Excretion
 - c) Nutrition
 - d) Digestion
10. Osphradium in *Pila globosa* is
- a) Chemo receptor
 - b) Thermo receptor
 - c) Photo receptor
 - d) Tango receptor
11. Book lungs are respiratory organs of
- a) Mollusca
 - b) Mammalia
 - c) Arachnida
 - d) Earthworms

20. Test cross is a cross between
- a) Heterozygous individual and recessive parent
 - b) Heterozygous individual and dominant parent
 - c) Homozygous individual and dominant parent
 - d) None of these
21. Barr body is associated with
- a) Autosome
 - b) Male sex only
 - c) X-chromosome
 - d) Y-chromosome
22. The jumping genes are called
- a) Cistrons
 - b) Mutons
 - c) Transposons
 - d) Recons
23. Initiation codon in eukaryotes is
- a) AUG
 - b) UAG
 - c) GAU
 - d) AGU
24. DNA multiplication is called
- a) Translation
 - b) Transcription
 - c) Transduction
 - d) Replication
25. Viruses are considered living because they
- a) multiply in the host cell
 - b) carry out anaerobic respiration
 - c) possess metabolic activity
 - d) cause infection
26. Which era is known as the 'golden age of reptiles'?
- a) Mesozoic
 - b) Coenozoic
 - c) Palaeozoic
 - d) Cosmozoic

27. The phenomenon “Ontogeny repeats phylogeny” is
- a) Recapitulation theory
 - b) Inheritance theory
 - c) Mutation theory
 - d) Natural selection theory
28. Two strands of DNA are
- a) Similar and parallel
 - b) Similar and antiparallel
 - c) Complementary and antiparallel
 - d) Complementary and parallel
29. A Nucleotide is
- a) Sugar + phosphate
 - b) Base + sugar + phosphate
 - c) Base + sugar + OH
 - d) Base + sugar
30. The technology of introduction of foreign genes for improving genotype is called
- a) Tissue culture
 - b) Immunisation
 - c) Biotechnology
 - d) Genetic engineering
31. Enzyme required for polymerase chain reaction (PCR) is
- a) RNA polymerase
 - b) Ribonuclease
 - c) Taq polymerase
 - d) Endonuclease
32. Alpha biodiversity is the diversity of
- a) Species at a local habitat
 - b) Communities
 - c) Range of communities
 - d) All the above

33. Gir forest of India is famous for
- a) Rhinoceros
 - b) Pelican
 - c) Tiger
 - d) Lion
34. Green house effect is related to
- a) Increased growth of green algae
 - b) Global warming
 - c) Cultivation of green vegetables in houses
 - d) Development of terrace gardens
35. One of the *ex-situ* conservation methods for endangered species is
- a) Wildlife sanctuaries
 - b) Biosphere reserves
 - c) Cryopreservation
 - d) National parks
36. Organization that publishes Red Data Book (Red list) is
- a) IUCN
 - b) NEERI
 - c) BNHS
 - d) CITES
37. *Chipko* movement is related to
- a) Plant breeding
 - b) Plant conservation
 - c) Animal breeding
 - d) Project Tiger
38. Damage to Taj Mahal is being caused by
- a) Acid rain
 - b) Smoke
 - c) Dust
 - d) Global warming
39. Cell eating is known as
- a) Osmosis
 - b) Phagocytosis
 - c) Diffusion
 - d) Pinocytosis

40. Green colour of bile is due to
- a) Bilirubin
 - b) Biliverdin
 - c) Sodium taurocholate
 - d) Sodium glycocholate
41. Which of the following does not produce any digestive enzyme?
- a) Pancreas
 - b) Liver
 - c) Stomach
 - d) Duodenum
42. Ptyalin is an enzyme present in
- a) Gastric juice
 - b) Pancreatic juice
 - c) Intestinal juice
 - d) Saliva
43. Succus entericus is secreted by
- a) Aurbach's plexus
 - b) Brunner's glands
 - c) Peyer's patches
 - d) Crypts of Lieberkuhn
44. Neurogenic heart is characteristic of
- a) Humans
 - b) Lower invertebrates
 - c) Rat
 - d) Rabbit
45. All veins have deoxygenated blood except
- a) Renal artery
 - b) Hepatic vein
 - c) Hepatic Portal vein
 - d) Pulmonary vein
46. Metastasis is the process of
- a) excessive cell proliferation
 - b) transformation of benign tumour into malignant tumour
 - c) movement of cancerous cells from one site to another site in the body
 - d) transformation of a normal cell into a cancerous cell

47. The pineal body is considered as
- a) an endocrine gland
 - b) an organ concerned with the voluntary actions
 - c) an organ concerned with vision
 - d) an endocrine gland and the vestige of third eye
48. What is the other name of vasopressin
- a) ADH
 - b) ACTH
 - c) LH
 - d) FSH
49. The neurohypophysis secretes
- a) Prolactin
 - b) Oxytocin
 - c) LH
 - d) Diabetogenic hormone
50. Notochord of frog develops from
- a) Ectoderm
 - b) Endoderm
 - c) Mesoderm
 - d) Mesoendoderm
51. Spermiogenesis refers to
- a) growth phase of spermatogenesis
 - b) phase of multiplication of spermatogenesis
 - c) metamorphosis of spermatids to sperm
 - d) spermatogenesis
52. Sertoli cells are
- a) Nurse cells
 - b) Secretory cells
 - c) Respiratory cells
 - d) Excretory cells
53. Corpus luteum is responsible for production of
- a) FSH
 - b) LH
 - c) Progesterone
 - d) Lactogenic principle

54. Fertilization in mammals takes place in
- a) Fallopian tube
 - b) Ovary
 - c) Uterus
 - d) None of the above
55. Cessation of menstrual cycle is called
- a) Puberty
 - b) Menarch
 - c) Menopause
 - d) Fertilization
56. The delivery of child or childbirth is called
- a) Lactation
 - b) Parturition
 - c) Micturition
 - d) Insemination
57. Sex hormones are
- a) Steroids
 - b) Glycoproteins
 - c) Proteins
 - d) Vitamins
58. Interstitial cells stimulating hormone is identical to
- a) FSH
 - b) LH
 - c) ACTH
 - d) Growth hormone
59. Skeleton in a vertebrate embryo develops from
- a) Ectoderm
 - b) Mesoderm
 - c) Endomesoderm
 - d) Endoderm
60. Emulsification of fat is carried out by
- a) HCl
 - b) Bile salts
 - c) Pancreatic juice
 - d) Bile pigments

ANSWER SHEET — PART — A

1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E
14	A	B	C	D	E
15	A	B	C	D	E
16	A	B	C	D	E
17	A	B	C	D	E
18	A	B	C	D	E
19	A	B	C	D	E
20	A	B	C	D	E

21	A	B	C	D	E
22	A	B	C	D	E
23	A	B	C	D	E
24	A	B	C	D	E
25	A	B	C	D	E
26	A	B	C	D	E
27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
31	A	B	C	D	E
32	A	B	C	D	E
33	A	B	C	D	E
34	A	B	C	D	E
35	A	B	C	D	E
36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E
40	A	B	C	D	E

41	A	B	C	D	E
42	A	B	C	D	E
43	A	B	C	D	E
44	A	B	C	D	E
45	A	B	C	D	E
46	A	B	C	D	E
47	A	B	C	D	E
48	A	B	C	D	E
49	A	B	C	D	E
50	A	B	C	D	E
51	A	B	C	D	E
52	A	B	C	D	E
53	A	B	C	D	E
54	A	B	C	D	E
55	A	B	C	D	E
56	A	B	C	D	E
57	A	B	C	D	E
58	A	B	C	D	E
59	A	B	C	D	E
60	A	B	C	D	E

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PART – B
(Descriptive Type)

Answer **any eight** questions.

(8 × 5 = 40 Marks)

1. Describe the life cycle of *Fasciola hepatica*.
2. Describe spermatogenesis in mammals.
3. Write an essay on pituitary gland and its hormones.
4. Describe the different types of excretory products in animals.
5. Give an account on the glands of the digestive system.
6. Write a note on the factors that regulate homeostasis.
7. Write an essay on biosphere reserves of India.
8. Describe the various larval forms of Echinoderms.
9. Write a note on Mendel's principles of inheritance.
10. Explain the principles and applications of recombinant DNA technology.
11. Write a note on DNA fingerprinting and its applications.
12. Describe in brief bird migration.

