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# GLOBAL TALENT SEARCH EXAMINATIONS (GTSE)

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## CLASS -XI

Max Marks: 100  
Time: 11:30 to 12:45 p.m.

### *BIOLOGY*

**General Instructions:** (*Read Instructions carefully*)

1. All questions are compulsory. First 15 minutes for reading instructions.
2. This paper contains **50 objective type questions**. Each question or incomplete sentence is followed by four suggested answers or completions. Select the one that is the most appropriate in each case and darken the correct alternative on the given answer-column, with a pencil or pen.
3. For each correct answer **2 marks** will be awarded and there is **no negative marking**.
4. No extra sheet will be provided.
5. Use of calculators & mobile is not permitted in examination hall.
6. Use of unfair means shall invite cancellation of the test

Name of the Student : \_\_\_\_\_

Roll No. :

Centre : \_\_\_\_\_

Invigilator's Signature : \_\_\_\_\_

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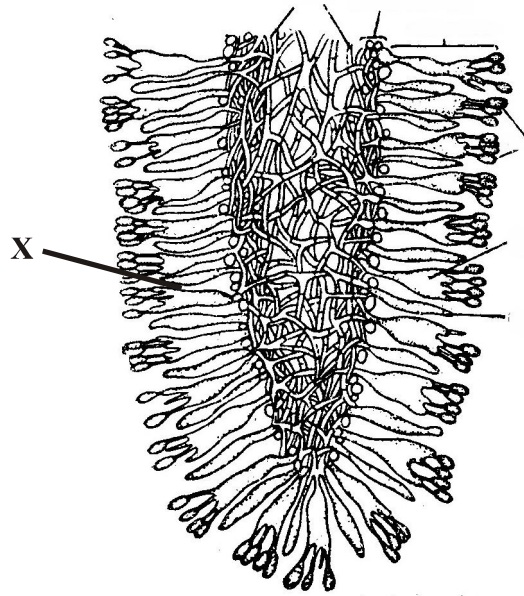
## AMITY INSTITUTE FOR COMPETITIVE EXAMINATIONS

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NOIDA CENTRE: Amity Campus, Sector-44, Noida - 201303. Ph.: 95120-2431839, 2431842  
Gurgaon: Amity International School, Sector-46, Gurgaon.

1. Identify "X" in the L.S. of GILL of *Agaricus*.

- (a) Trama
- (b) Hymenium
- (c) Sub-hymenium
- (d) Basidium



2. Which group of plants exhibits origin and evolution of stele ?

- (a) Bryophyta
- (b) Pteridophyta
- (c) Gymnosperms
- (d) Angiosperms

3. The first seeded plant is

- (a) *Selaginella*
- (b) *Pteridium*
- (c) Pteridosperms
- (d) *Nephrolepis*

4. How many generations are represented in the seed of *Pinus* ?

- (a) One
- (b) Two
- (c) Three
- (d) Four

5. Anti-rabies vaccine was prepared by

- (a) Salk
- (b) Pasteur
- (c) Jenner
- (d) Koch

6. Antiviral glycoproteins produced in virus infected cells of vertebrates are called

- (a) Phytoalexins
- (b) Oncogenes
- (c) Interferon
- (d) Allochemicals

7. Prions are

- (a) Infectious protein with DNA
- (b) Infectious protein without DNA
- (c) Infectious protein with RNA
- (d) Non-infectious protein without DNA

- : Rough Space : -

8. Endospores are resting spores produced by bacteria. These are found in  
(a) *Bacillus* and *Azotobacter* (b) *Clostridium* and *Pseudomonas*  
(c) *Gram negative bacteria* (d) *Gram positive bacteria*
9. In a young sporophyte of fern, nourishment from prothallus is drawn by the  
(a) Root (b) Rhizoids (c) Haustoria (d) Foot
10. Spore sac, air spaces and columella are related with which part of moss sporophyte  
(a) Seta (b) Operculum (c) Apophysis (d) Theca
11. Which of the following bryophyte is related with discovery of sex chromosome in plants ?  
(a) *Andrea* (b) *Funaria* (c) *Sphagnum* (d) *Sphaerocarpus*
12. The number of chromosome in archegonia of fern is 8. What will be the number of chromosome in leaf, spore and indusium ?  
(a) 16, 8, 8 (b) 8, 16, 16 (c) 16, 8, 16 (d) 8, 16, 8
13. The largest ovule, the largest male cone and largest male gamete occur respectively in  
(a) *Cycas*, *Pinus* and *Cycas* (b) *Pinus*, *Cycas*, *Cycas*  
(c) *Cycas*, *Cycas*, *Cycas* (d) *Cycas*, *Pinus*, *Ephedra*
14. The edible part of *Pinus gerardiana* seed is  
(a) Pericarp (b) Endosperm (c) Cotyledons (d) Seed coat
15. Which of the following is an example of homologous organs ?  
(a) Thorn of *Bougainvillea* and tendril of *Cucurbita*  
(b) Stipules of *Lathyrus aphaca* and petiole of *Acacia*  
(c) Tendrils of *Passiflora* and *Gloriosa*  
(d) Both (a) and (c)
16. Numerous male flowers and a single carpel are found in  
(a) Head (b) Verticillaster (c) Cyathium (d) Hypanthodium

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- : Rough Space : -

17. Which one of the following is wrongly matched?
- (a) Hypanthodium – Syconus (b) Sunflower – Cypsela  
(c) Umbel – Cremocarp (d) Catkin – Sorosis
18. Which one of the following is wrongly paired?
- (a) Gram and pea (b) Castor and maize  
(c) Jackfruit and pineapple (d) Nucellus and megasporangium
19. Adnate stipules occur in
- (a) Rose and *Ixora* (b) China rose and *Polygonum*  
(c) Passiflora and *Rumex* (d) Strawberry and rose
20. What is the edible part in cucumber?
- (a) Epicarp, mesocarp and endocarp and seeds  
(b) Mesocarp and endocarp  
(c) Endocarp, placentae and seeds  
(d) Mesocarp, endocarp, placentae and seeds
21. Smut disease develops in the
- (a) Roots (b) Stem (c) Leaves (d) Ovaries
22. The cells of slime moulds are
- (a) Uninucleate and haploid (b) Uninucleate and diploid  
(c) Binucleate and haploid (d) Multinucleate and diploid
23. Protonema of moss develops from
- (a) Archosporium (b) Amphithecium (c) Endothecium (d) Spore
24. 'Chilgoza' is the seed of
- (a) *Pinus roxburghii* (b) *Pinus longifolia*  
(c) *Pinus gerardiana* (d) *Pinus sylvestris*

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- : Rough Space : -

25. How many generations occur the seed of *Pinus* ?  
(a) 1 (b) 2 (c) 3 (d) 4
26. Heart burn is associated with  
(a) Acidic components of stomach enter the oesophagus due to malfunctioning of oesophageal sphincters  
(b) High acidity in the stomach  
(c) Alkaline components of duodenum enter the stomach due to abnormal functioning of pyloric sphincters  
(d) Excess accumulation of pericardial fluid around heart
27. An example of competitive inhibition of an enzyme is the inhibition of  
(a) Succinate dehydrogenase by malonic acid  
(b) Cytochrome oxidase by cyanide  
(c) Hexokinase by glucose-6-phosphate  
(d) Carbonic anhydrase by carbon dioxide
28. The reagent used to detect sugar, in the urine, is  
(a) Tollen's reagent (b) Fehling's solution (c) Benedict's solution (d) All of the above
29. *Pheretima posthuma* has an enormous economic value, because  
(a) Birds are killed due to feeding on *P. posthuma* contaminated with DDT and malathion residues  
(b) They are used as fish bait and worn around arm as good omen by Baster tribals  
(c) They make soil porous, leave their castings and bring in leaves etc. in the soil  
(d) Their burrows make soil porous and loose and they excrete lot of calcium phosphate in the soil
30. Mark the true statement  
(a) Oxytocin hormone relaxes the pelvic girdle/muscles of vaginal aperture during birth and secreted by anterior lobe of pituitary  
(b) Prolactin stimulates as well as maintains the release of milk from mammary glands  
(c) FSH stimulates ovarian follicles to mature and causes ovulation, and is secreted by anterior lobe of pituitary  
(d) LH is produced by anterior pituitary and causes ovulation

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- : Rough Space : -

31. In cockroach blood is devoid of respiratory pigment, because *Periplanata americana*
- (a) Does not respire
  - (b) Respires anaerobically
  - (c) Oxygen passes to all the tissues through diffusion
  - (d) Oxygen reaches tissues through tracheoles
32. Lateral line sense organs found in fishes have disappeared in amphibians due to
- (a) Development of sturdy legs
  - (b) Change over to herbivorous feeding
  - (c) Occurrence of metamorphosis in amphibians
  - (d) Evolution of terrestrial habit.
33. The correct statement regarding *Ascaris*?
- (a) A larval stage of *Ascaris* is swallowed by cattle which in turn infects human beings
  - (b) Once inside host's intestine, *Ascaris* larva develops directly into an adult without entering other organs of the host
  - (c) Snail act as a secondary host of *Ascaris*
  - (d) Eggs of *Ascaris* containing second stage juvenile larvae when swallowed by man becomes infective
34. Histones are rich in which of the following amino acids ?
- (a) Arginine and lysine
  - (b) Lysine and tryptophan
  - (c) Arginine and tryptophan
  - (d) Arginine, lysine and tryptophan
35. The fight-or-flight response is developed by hormones of the
- (a) Adrenal cortex
  - (b) Adrenal medulla
  - (c) Hypothalamus
  - (d) Cortico-medullary complex
36. Detoxification in cells is done with the help of
- (a) Ribosomes
  - (b) Endoplasmic reticulum
  - (c) Lysosomes
  - (d) Sphaerosome

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- : Rough Space : -

37. The sodium potassium pump
- (a) Transports  $\text{Na}^+$  into the neuron and  $\text{K}^+$  out
  - (b) Transports  $\text{Na}^+$  and  $\text{K}^+$  out of the neuron
  - (c) Transports  $\text{K}^+$  into the neuron and  $\text{Na}^+$  out
  - (d) Transports  $\text{Na}^+$  and  $\text{K}^+$  into the neuron
38. Wheel organ of *Lancelet* is helpful in
- (a) Locomotion
  - (b) Ciliary feeding
  - (c) Thermoregulation
  - (d) None of these
39. During an injury nasal septum gets damaged then which cartilage will be preferred for its repair
- (a) Elastic cartilage
  - (b) Hyaline cartilage
  - (c) Calcified cartilage
  - (d) Fibrous cartilage
40. When we move from dark to light, we fail to see for sometimes but after a while visibility becomes normal. It is an example of
- (a) Accomodation
  - (b) Adaptation
  - (c) Mutation
  - (d) Photoperiodism
41. Select the correct breakup of the classes of RNA in large subunit of 70S ribosome
- (a) 25 S + 5 S + 5.8 S
  - (b) 28 S-29 S + 5 S + 5.8 S
  - (c) 16 S-17 S + 5 S
  - (d) 23 S + 5 S
42. Deficiency of plasma thromboplastin component as blood clotting factor leads to
- (a) Thrombosis
  - (b) Stuart disease
  - (c) Thrombocytopenia
  - (d) Christmas disease
43. Which of the following characters is dissimilar in aves and mammals ?
- (a) The type of systemic arch
  - (b) Metanephric kidney
  - (c) Number of foetal membranes
  - (d) Homeothermy

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- : Rough Space : -

44. The exchange of gases in lungs takes place by  
(a) Simple diffusion (b) Facilitated diffusion (c) Active transport (d) Both (a) and (b)
45. The regulation and control of cell cycle operates mainly in which part of it ?  
(a) S - phase (b) M - phase (c)  $G_1$  - phase (d)  $G_2$  - phase
46. In amniote female, the ureter is formed from  
(a) Wolffian duct (b) Mullerian duct (c) Metanephric duct (d) None of these
47. Vaccination in malaria is out of question because  
(a) *Plasmodium* Produces miltue bodies  
(b) *Plasmodium* Produces antitoxins  
(c) It does not produce antibodies and anti-toxins  
(d) None of the above
48. Raffinose has, one molecule each, of  
(a) Glucose, fructose and galactose (b) Glucose, pentose and maltose  
(c) Glucose, glucose and galactose (d) Fructose, fructose and galactose
49. Pavement epithelium is  
(a) Cuboidal (b) Squamous (c) Columnar (d) Ciliated
50. In which enzyme inhibition  $K_m$  remains unchanged but  $V_{max}$  decreases ?  
(a) Competitive inhibition (b) Non-competitive inhibition  
(c) Allosteric inhibition (d) None of these



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- : Rough Space : -



**ANSWERS : CLASS XI (BIOLOGY)**

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|---------|---------|---------|---------|---------|
| 1. (d)  | 2. (b)  | 3. (c)  | 4. (c)  | 5. (b)  |
| 6. (c)  | 7. (b)  | 8. (d)  | 9. (d)  | 10. (d) |
| 11. (d) | 12. (c) | 13. (c) | 14. (b) | 15. (a) |
| 16. (c) | 17. (b) | 18. (b) | 19. (d) | 20. (d) |
| 21. (d) | 22. (d) | 23. (d) | 24. (c) | 25. (c) |
| 26. (a) | 27. (a) | 28. (d) | 29. (c) | 30. (d) |
| 31. (d) | 32. (d) | 33. (d) | 34. (a) | 35. (b) |
| 36. (b) | 37. (c) | 38. (b) | 39. (b) | 40. (b) |
| 41. (d) | 42. (d) | 43. (a) | 44. (a) | 45. (c) |
| 46. (c) | 47. (c) | 48. (a) | 49. (b) | 50. (b) |

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- : *Rough Space* : -