



# BIOLOGY

## BOOKS - MBD

### MODEL TEST PAPER -3

#### Exercise

1. State the difference between meicypte and gamete with respect to chromosome number.



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2. What is self-incompatibility ?



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3. Name the type of pollination in self - incompatible plants.



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4. Why is whiptail lizard referred to as pathenogenetic?



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5. Do you think Mendal's laws of inheritance would have been different if the characters that he close were located on the same chromosome.



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6. What is industrial melanism ?



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7. List avian characteristics of Archaeopteryx.



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8. Name the commonly used vector for cloning genes into higher organisms.



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**9.** Gene therapy can cure the important genetic disorders in humans. Comment.



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**10.** When and why do some animals like snails go into aestivation?



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**11.** Under unfavourable conditions, Amoeba shows encystation.what does it mean?



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**12.** Write one difference between binary fission and budding.



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13. Which of the following statement is true of hydra?

A. a.it produces asexual gemmules.

B. b.it produces unicellular bud.

C. c. it produces multicellularbud.

D. d. none of these.

**Answer:**



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**14.** How is the phenomenon regeneration useful to a lizard?



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**15.** Name the vegetative propagules of Agave and bryophyllum.



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**16.** Give one example each of a plant that reproduces by runner and offset





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**17.** Write the name of plant that is referred to as the terror of bengal.



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**18.** Removal of goands can not be considered as contraceptive options. Why?



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**19.** How do we compute the age of fossils?



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**20.** "Plant breeding technique has helped sugar industry in North India" Explain.



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**21.** Biotechnological techniques can help to diagnose the pathogen much before the

symptoms of the disease appear in the patient. Suggest any two such techniques.



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**22.** Mention the form in which inactive protein toxin is produced by *Bacillus thuringiensis*. How does it get activated in the pest body to kill it?



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**23.** Explain the role of enzymes in the extraction of DNA from *Rhizopus* in its purest form.



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**24.** Define vector. Give the properties of a "Good Vector".



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**25.** How and why is the bacterium *Thermus aquaticus* employed in recombinant DNA technology? Explain.



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**26.** Why are nutrient cycles in nature called biotechnological cycles?



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**27.** How have human activities caused desertification ? Explain.



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**28.** Which of the following statement is true of ginger?

A. a germinating bud appears from the eye of stem tuber

B. b. germinating bud appears from the  
node of the rhizome

C. c. germinating bud appear from the  
notch of the leaf margin

D. d. none of these

**Answer:**



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**29.** Name the vegetative propagules of potato and pistia



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**30.** Briefly explain XX-XO type of sex determination.



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**31.** Name the units of vegetative propagation in grass and water hyacinth.



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**32.** Which of the following statement is true in bryophyllum?

A. a germinating bud appears from the eye of the tuber.,

B. b. germinating bud appear from the node of rhizome.

C. c. germinating bud appear from the notch at the leaf margin

D. d. none of these.

**Answer:**



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**33.** which of the following statement is true of potato?

A. a germinating bud appears from the eye of the stem tuber

B. b. germinating bud appears from node of rhizome.

C. c. germinating bud appear from the notch at the leaf margin

D. d. none of these.

**Answer:**



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**34.** Name the phase, all organisms have to pass through before they can reproduce sexually.



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**35.** Mention the unique flowering phenomenon exhibited by strobilanthus

kunthiana.



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**36.** Name two animals that exhibit oestrous cycle.



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**37.** What is competition? Why is it not true always?



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**38.** Explain competitive release and Gause's competitive exclusion principle.



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**39.** A woman has conceived and implantation has occurred. Discuss the sequence of changes up to parturition which will take place within her body under the influence of hormones.



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**40.** Mention the unique feature with respect to flowering and fruiting in bamboo species.



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**41.** When the pollen of a flower is transferred to the stigma of another flower on the same plant, the process is known as

A. a. autogamy

B. b. geitonogamy

C. c. xenogamy

D. d. cleistogamy

**Answer:**



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**42.** In a fertilised embryo sac, the haploid, diploid and triploid structures are;

A. a. Synergids, zygote and primary endosperm nucleus.



B. b. Synergids, antipodal and polar nuclei.

C. c. Antipodal, synergid and primary endosperm nucleus.

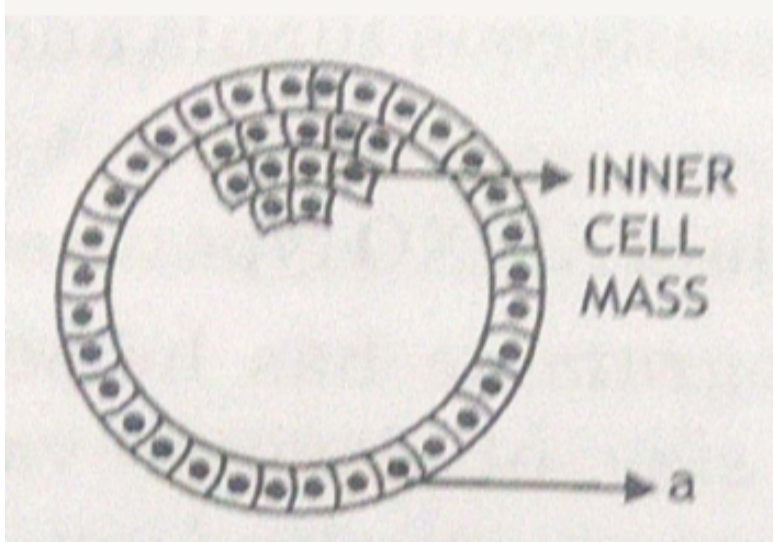
D. d. Synergid, polar nuclei and zygote.

**Answer:**



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**43.** Study the figure given below and answer the questions that follow:



Where are the stem cells located in this embryo?

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**44.** List any four major goals of Human Genome project.





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**45.** Write any four ways by which the knowledge from HGP is of significance for humans.



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**46.** How does the process of natural selection affect Hardy-Weinberg equilibrium? List the other four factors that disturb the equilibrium.



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**47.** List the harmful effects caused by alcohol /drug abuse.



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**48.** Of a patient is advised anti-retroviral drug, Name the possible infection he/she is likely to be suffering from . Name the causative organism.



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**49.** How do vaccines prevent subsequent microbial infection by the same pathogen?



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**50.** Differentiate between a Cancerous cell and a Normal cell.



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51. Many microbial pathogens enter the gut of humans along with food. Name the physiological barrier that protects the body from such pathogens.



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