UNIVERSAL ACADEMY

*Icon of Success and Excellence*

# MOCK CET - 2015

| DATE | SUBJECT | TIME |
|---|---|---|
| 02.05.2015 | BIOLOGY | 3.50 PM TO 5.00 PM |

| MAXIMUM MARKS | TOTAL DURATION | MAXIMUM TIME FOR ANSWERING |
|---|---|---|
| 60 | 80 MINUTES | 70 MINUTES |

| MENTION YOUR CET NUMBER | | | | | QUESTION BOOKLET DETAILS | |
|---|---|---|---|---|---|---|
| | | | | | VERSION CODE | SERIAL NUMBER |
| | | | | | A–3 | |

**DOs:**

1. Check whether the CET No. has been entered and shaded in the respective circles on the OMR answer sheet.
2. This Question Booklet is issued to you by the Invigilator after **1st Bell** i.e, after **3.45 p.m**
3. The Serial Number of this question booklet should be entered on the OMR answer sheet.
4. The Version Code of this question booklet should be entered on the OMR answer sheet and the respective circles should be shaded completely.
5. Compulsory sign at the bottom portion of the OMR answer sheet in the space provided.

**DONTs:**

1. **The timing and marks printed on the OMR answer sheet should not be damaged/mutilated/ spoiled.**
2. The **2nd Bell** rings at **3.50 p.m.** till then,
   - Do not remove the seal/staple present on the right hand side of this question booklet.
   - Do not look inside this question booklet.
   - Do not start answering on the OMR answer sheet.

## IMPORTANT INSTRUCTIONS TO CANDIDATES

1. This question booklet contains 60 questions and each question will have one statement and four distraction (four different options / choices).
2. After the **2nd Bell** is rung at **3.50 p.m**. Remove the seal/staple present on the right hand side of this question booklet and start answering on the OMR answer sheet.
3. During the subsequent 70 minutes:
   - Read each question carefully.
   - Choose the correct answer from out of the four available distracters (options /choices) given under each question/statement.
   - Completely **darken / shade** the relevant circle with a **BLUE OR BLACK INK BALLPOINT PEN against the question number on the answer sheet.**

**CORRECT METHOD OF SHADING THE CIRCLE ON THE ANSWER SHEET IS AS SHOWN BELOW:**


4. Please note that even a minute unintended ink dot on the answer sheet will also be recognized and recorded by the scanner. Therefore, avoid multiple markings of any kind on the OMR sheet.
5. Use the space provided on each page of the question booklet for Rough work. Do not use the OMR answer sheet for the same.
6. After the **last bell** is rung at **5.00 pm** stop writing on the OMR answer sheet and affix your LEFT HAND THUMB IMPRESSION on the OMR answer sheet as per the instructions.
7. Hand over the OMR answer sheet to the room invigilator as it is.
8. After separating and retaining the top sheet, (UA copy ) the invigilator will return the bottom sheet replica (candidate's copy) to you to carry home for self – evaluation.
9. Preserve the replica of the OMR answer sheet for a minimum period of ONE week. For results, log on to the website www.uaes.in 5 days after the examination.

# BIOLOGY CET – 3

1. Appearance of vegetative propagules from the nodes of plants such as sugarcane and ginger is mainly because
   1) Nodes are shorter than internodes 2) Nodes have meristamatic cells
   3) Nodes are located near the soil 4) Nodes have non – photosynthetic cells.
2. Which one of the following in a barrier method used by men for contraception
   1) Diaphragm 2) pills 3) cervical cap 4) condoms
3. Plasmodesmata are
   1) Connection between adjacent cells
   2) Lignified cemented layers between cells.
   3) Membranes connecting the nucleus with plasmalemma
   4) Locomotory structure
4. There is no DNA in
   1) A mature spermatozoa 2) Hair root
   3) An enucleated ovum 4) mature RBC
5. Uric acid is the chief nitrogenous component of the excretory products of
   1) Man 2) frog 3) Earthworm 4) cockroach.
6. Which part of Human brain is concerned with the regulation of body temperature.
   1) Cerebrum 2) cerebellum 3) medulla oblongata 4) Hypothalamus.
7. Foetal ejection reflex in human female is induced by
   1) Release of oxytocin from pituitary 2) Pressure exerted by amniotic fluid
   3) Differentiation of mammary glands. 4) Fully developed foetus and placenta.
8. The permissible use of the technique amniocentesis is for :
   1) Artificial Insemination.
   2) Transfer of embryo into the uterus of surrogate mother.
   3) Detecting any genetic abnormality.
   4) Detecting sex of the unborn foetus.
9. Which one of the following is not a lateral meristem.
   1) Interfascicular cambium 2) phellogen
   3) Intercalary meristem 4) Intrafascicular cambium
10. Single – celled eukaryotes are included in
    1) Fungi 2) Archaea 3) Monera 4) Protista
11. Which one of the following does not follow the central dogma of molecular Biology.
    1) Mucor 2) Chlamydomonas 3) HIV 4) Pea
12. A common Biocontrol agent for the control of plant disease is
    1) Bacillus thuringiensis 2) Glomus 3) Trichoderma 4) Baculovirus.
13. Stirred tank Bioreactors have been designed for
    1) Purification of the product
    2) Ensuring anaerobic conditions in the culture vessel
    3) Availability of $O_2$ throughout the process
    4) Addition of preservatives to the product.
14. Virus envelope is known as
    1) Virion 2) Nucleoprotein 3) Core 4) Capsid
15. Breeding of crops with high levels of minerals, vitamins and proteins is called
    1) Biofortification 2) Biomagnification 3) Micropropagation 4) somatic hybridization

16. Male and female gametophytes are independent and free – living in
    1) Castor 2) Pinus 3) Marchantia 4) Mustard
17. The biomass available for consumption by the herbivores and the decomposers is called
    1) Secondary productivity 2) Standing crop
    3) Gross primary productivity 4) Net primary productivity
18. The technical term used for the androecium in a flower of hibiscus rosasinensis is
    1) Diadelphous 2) polyandrous 3) polyadelphous 4) Monadelphous.
19. Darwin's finches are good example of
    1) Connecting link 2) Adaptive radiation 3) Convergent evolution 4) Industrial melanism
20. Invitro fertilization is a technique that involves transfer of which one of the following into the fallopian tube.
    1) Either zygote or early embryo upto 8 celled stage
    2) Embryo of 32 celled stage.
    3) Zygote only
    4) embryo only, upto 8 cell stage.
21. Which is Incorrect
    1) Blood group 'O' RBCs have both A and B antigens
    2) Eosinophils resist infections and take part in allergic reactions.
    3) RBCs contain carbonic annhydrase
    4) T wave of ECG represents end of ventricular depolarization.
22. What is correct?
    1) Cultivated sludge is digested by Aerobic bacteria to form marsh gas.
    2) Aspergillus niger produces cyclosporine A
    3) Fleming, chanin and flory awarded Noble prize for discovering penicillin.
    4) BOD is amount of oxygen produced by bacteria on decomposition.
23. What is the source of ECORI
    1) Escherichia coli R1 2) Escherichia coli R1 13
    3) Esherichia coli R x 13 4) Escherichia coli R y 13
24. What is correct?
    1) Lion and leopard have convergent evolution
    2) Homo habilus and homo erectus are closely related.
    3) Biston betularia shows cryptic camouflage.
    4) Natural selection is responsible for extinction of dinosaurs.
25. Which is the best method of germplasm conservation.
    1) Herbarium 2) Botanical garden 3) Zoological park 4) seed bank.
26. Placenta functions as foetal
    1) Alimentary canal 2) Lung 3) Kidney 4) All of these
27. Shedding of endometrial lining causes
    1) Menstruation 2) Ovulation 3) fertilization 4) Placentation
28. Hyaluronidase is found in
    1) Sperms 2) Graaffian follicle 3) eggs 4) ovary
29. Antrum is the cavity of
    1) Ovary 2) Gastrula 3) Blastula 4) Graaffian follicle
30. During pregnancy, one of the following harmone is secreted by corpus luteum
    1) LH 2) HCG 3) Progesterone 4) FSH

31. The cortical granules in egg are present
    1) Below the plasma membrane
    2) In between the plasma and vitelline membrane
    3) Below the vitelline membrane
    4) All of the above.
32. A threatened species is
    1) Only endangered species 2) only vulnerable species
    3) Endangered and rare species 4) Endangered, vulnerable and rare.
33. Which national park is known for one horned Rhino
    1) Kanha 2) Corbett 3) Kajiranga 4) Bandhavgarh
34. In a grazing food chain carnivores may also be referred to as
    1) Primary producers 2) Secondary producers
    3) Primary consumers 4) Secondary consumers
35. Seminiferous plant is
    1) Having only staminate flowers 2) Reproducing by seeds
    3) Reproducing by vegetative propagation 4) none of the above.
36. Synergids are
    1) Diploid 2) Haploid 3) Triploid 4) Tetraploid.
37. How many meiotic divisions are necessary to produce 100 megaspores
    1) 25 2) 50 3) 100 4) 200
38. How many nuclei are present in fully developed male gametophyte
    1) 4 2) 2 3)1 4)3
39. Self sterility is a term applied when
    1) Pollen is sterile
    2) Ovule is sterile
    3) Both 1 and 2
    4) A pollen fails to germinate on the stigma of same flower.
40. The microsporangia in a flower is represented by
    1) Embryosac 2) pollen sac 3) Stamens 4) carpel.
41. Tapetal cells are
    1) Haploid 2) Polyploid 3) Diploid 4) Triploid
42. Best method of haploid production is
    1) Hybridization 2) Delayed pollination 3) pollen culture 4) ovary
43. Old microspores separated from microspores tetrads are called
    1) Megaspores 2) Vegetative cell 3) Generative cell 4) pollen grain
44. Male gametes are finally liberated in
    1) Nucleus 2) Ovule 3) Embryosac 4) Ovary
45. Male gametes are developed from generative cell by
    1) Meiosis 2) Mitosis 3) Amitosis 4) None
46. Meiosis occurs in Angiosperms when
    1) Flowers are formed 2) seeds are formed
    3) Pollen grains are formed 4) none
47. The most common type of ovule in Angiosperms is
    1) Orthotropous 2) Anatropous 3) Hemianatropous 4) campylotropous
48. Carpels represent
    1) Megasporangia 2) Megaspores 3) Megasporophyll 4) microsporophyll.

49. Sexuality in plants was observed by
    1) Grew 2) Kolreuter 3) Camerarius 4) Amici
50. Germ pores are found in
    1) Ovules 2) Seeds 3) Microspores 4) Megaspores
51. Main function of endothecium is
    1) Mechanical 2) Nutritive 3) Dehiscense 4) None
52. Single microsporangium per anther is found is
    1) Gossypium 2) Hibiscus 3) Arceuthobium 4) Najas.
53. Embryoids are
    1) Immature embryos
    2) Non – zygotic embryos developed through tissue culture
    3) Embryos formed by parthenogenesis
    4) Embryos which lack vitality
54. Male flower is known as
    1) Pistillate 2) Unisexual 3) Staminate 4) None
55. Pollination through snails is known as
    1) Ornithophily 2) Malacophily 3) Mermecophily 4) Entemophily
56. Ovule of an Angiosperm can be called as
    1) Microsporangium 2) megasporangium 3) Microgametangium 4) None
57. Meiosis in ovule takes place in
    1) Nucellus 2) Megaspore mother cell
    3) Megaspore 4) Archesporium
58. Biopiracy is
    1) Exploitation of Bioresources 2) Patenting Bioresources of others
    3) Use of bioresources without authorization 4) Both 2 and 3
59. A plant of reed swamp stage is
    1) Juncus 2) Salix 3) Trapa 4) Sagittaria.
60. Succession is
    1) Orderly process of community change till stability
    2) Gradual convergent, directional and continuous process
    3) Series of biotic communities that appear generally in barren area.
    4) All the above.