# BIOLOGY

# AAKASH INSTITUTE ENGLISH

## Mock test 29

**Example**

**1.** One of the causes of variation known by early agriculturists, was hidden in

(a) Formation of diploid gametes

(b) Fusion of identical gametes

(c) Sexual reproduction

(d) Both (a) & (b)

A. Formation of deploid gametes

B. Fusion of identical gametes

C. sexual reproduction

D. Both (1) & (2)

**Answer: C**

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**2.** Successfully bred domesticated varieties from various plants and animals are obtained through

A. Artificial selection

B. Selective crossing

C. Emasculation

D. all except (3)

**Answer: D**

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**3.** A field of pea has plants bearing both yellow and green seeds green sheet colour is preferred, which of the following cross if performed repatedly has a higher probability for obtaining pure line for green seed colour?

A. $YY \times YY$

B. $Yy \times YY$

C. $Yy \times yy$

D. $Yy \times Yy$

**Answer: C**

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**4.** By conducting_____ G. J. Mendel first demonstrate the scientific based of of_____.

A. selfing experiments, heredity and variation

B. Hybridisation experiments, chromosomal behaviour of gene

C. hybridisation experiment, inheritance and variation Himachal Bollywood

D. selfing experiments, one gene interaction

**Answer: C**

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**5.** mendelian experiments were infact the extension and development of hybridisation experiments on pea conducted by

(a) Knight only

(b) Goss only

(c) Naudin only

(d) Both Knight and goss

A. Knight only

B. Goss only

C. Naudin only

D. Both Knight and goss

**Answer: D**

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**6.** select odd one out w.r.t recessive trait in pea plant

A. green seed colour

B. green pod colour

C. yellow pod colour

D. white flower colour

**Answer: B**

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**7.** Term 'Pure line' was coined by

(a) Mendel

(b) Johannsen

(c) Bateson

(d) T.H. Morgan

A. Mendel

B. Johannsen

C. Bateson

D. T.H. Morgan

**Answer: B**

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**8.** which of the following trait of garden pea is not present on 4th chromosome?

A. flower position

B. stem height

C. pod shape

D. pod colour

**Answer: D**

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**9.** Mark the incorrect statement w.r.t law of segregation

A. Each gamete contains only one allele for a gene

B. The two alleles present in the F_1 generation segregate during random fusion of gametes, thus giving 3 : 1 ratio

C. Each gamete is always pure for its/a trait

D. The recessive trait which is not observed in the $F_1$ generation reappears in $F_2$ generation

**Answer: B**

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**10.** Mendel failed to obtain the same results on

(a) Hawkweed

(b) Lablab

(c) Cucurbita pepo

(d) Both (a) & (b)

A. Hawkweed

B. Lablab

C. Cucurbita pepo

D. Both (1)&(2)

**Answer: D**

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**11.** Who coined the term 'heterozygous'?

A. Bateson

B. Saunders

C. Jahannsen

D. All except (3)

**Answer: D**

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**12.** Who gave mendelian inclusions the shape of laws?

(a) Carl Correns

(b) Hugo de Vries

(c) Tschermak

(d) All of these

A. Carl Correns

B. Hugo de Vries

C. Tschermak

D. All of these

**Answer: A**

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**13.** For heterozygous tall plant of pea undergoing selfing, what would be the sum of phenotype and genotypes obtained in F1 generation?

A. 2

B. 5

C. 3

D. 4

**Answer: B**

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**14.** Percentage of inflated pod, wrinkled seed and axial flower obtained in F_2 generation of Mendel's monohybrid cross are respectively

A. 75%, 75%, 25%

B. 25%, 50%,75%

C. 75%,50%,25%

D. 75%,25%,75%

**Answer: D**

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**15.** In a mendel's monohybrid cross for the shapes of pea seeds,1600 seeds were obtained in F_2 generation. What will be the number of round seed and hybrid round seed, respectively?

A. 1200 & 800

B. 800 & 1200

C. 400 & 800

D. 1200 & 400

**Answer: A**

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**16.** When F_1 program shown intermediate phenotype between dominant and recessive phenotypes such as gene interaction is called

A. Complete dominance

B. Over dominance

C. pseudodominance

D. Incomplete dominance

**Answer: D**

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**17.** phenotypic and genotypic ratios are equal in

A. incomplete dominance

B. Test cross

C. All monohybrid crosses

D. Both (1)&(2)

**Answer: D**

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**18.** white eye mutation leads to depigmentation in many parts of the body in Drosophila. it is referred as

A. Multiple alletes

B. Polymorphic effect

C. pleiotropic effect

D. Morphan syndrome

**Answer: C**

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**19.** The _____ allele representing the original phenotype is_____ type and the allele _____ is generally the_____ type/allele.

A. Functional, dominant, modified, recessive

B. unmodified, wild, modified, mutant

C. modified, wild unmodified, recessive

D. Both (1) & (2)

**Answer: D**

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**20.** when a cross is made between pink flower and red flower snap dragon plants, what proportion phenotype in the F_1 offspring could be expected to be red?

A. 0.25

B. 0.75

C. 0.5

D. 0.125

**Answer: C**

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**21.** Presence of more than two alleles for a gene in a population is referred as

A. Mutant alleles

B. Multiple alleles

C. isoalles

D. Pseudoalleles

**Answer: B**

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**22.** select the set of parents that cannot produce child with blood group 'O'

A. (a) $I^Ai \times I^Ai$

B. (b) $I^Bi \times I^AI^A$

C. (c) $ii \times I^Ai$

D. (d) $I^BI^B \times I^AI^B$

**Answer: A**

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**23.** Human beings have_____ alleles for ABO blood grouping with _____ phenotypes and_____ genotypes.

A. 4,3,6

B. 4,6,3

C. 3,4,6

D. 6,3,4

**Answer: C**

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**24.** Theoretically, the modified allele could be responsible for the production of A. a non functional enzyme B. normal or less effecient enzyme C. No enzyme at all

A. A only

B. A & B only

C. B only

D. A,B and C

**Answer: D**

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**25.** For ABO system of blood group in humans, allele IA produces _____ enzyme.

A. N- acetylgalactosamine transferase

B. Glactosyl transferase

C. N- muramic transferase

D. NAG & NAM

**Answer: A**

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**26.** which of the following is correct regarding the location and event that occurs during capacitation of sperms?

A. Epididymis (location) & Maturation of sperm (Events)

B. Male urethra ( Location) & Gain in sperm motility ( Events)

C. female reproductive tract ( Location) & chemical changes in sperms which

prepare it to fertilize ovum ( Events)

D. Vas deferens ( Location) & Loss of sperm tail ( Events)

**Answer: C**

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**27.** which of the followin enzyme helps sperm to penetrate zone pellucida ?

A. hyaluronidase

B. corona penetrating enzyme

C. fertilizin

D. acrosin

**Answer: D**

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**28.** which of the following event is/are included in fast block to prevent polyspermy?

A. zona reactions

B. depolarization of ovum membrane

C. cortical reaction

D. closing of Na^+ chanels of the ovum membrane

**Answer: B**

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**29.** The event that triggers the formation of ootid is

A. binding of sperm head to receptors ( ZP3) on zona pollucida

B. Entry of sperm into secondary oocyte

C. Cortical reaction

D. Entry of sperm into fallopian tube

**Answer: B**

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**30.** A leads to mixing of genetic material of male and female which is known as B, which result is formation of C. Fill in the above blanks with suitable option

A. fertilization ( A) & syngamy ( B) & Synkaryon (C)

B. Fertilization (A) & Apomixis (B) & Embryo (C)

C. Syngamy (A) & Amphimixis (B) & Synkaryon (C)

D. Syngamy (A) & Apomixis (B) & Synkaryon (C)

**Answer: C**

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**31.** During embryonic development of human, second cleavage is completed after about

A. 30 hours of fertilization

B. 60 hours of fertilization

C. 72 hours of fertilization

D. 48 hours of fertilization

**Answer: B**

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**32.** which of the following is correct regarding cleavage division?

A. cleavage divisions are resulting in formation of blastomeres

B. cleavage divisions in mammals are slow and synchronous

C. during cleavage there is increase in DNA :cytoplasm ratio

D. zona pellucida breaks after 3rd cleavage division

**Answer: C**

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**33.** in mammals embryo proper is formed from

A. trophoblast

B. inner cell mass

C. Cells of Rauber

D. Cytotrophoblast

**Answer: B**

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**34.** The stage of embryo development at which implantation occurs in human females is

A. morula stage

B. gastrula stage

C. blastocyst stage

D. Zygote Stage

**Answer: C**

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**35.** The portion of the endometrium that covers the embryo and is located between the embryo and uterine cavity is the

A. Decidua basalis

B. Decidua capsularis

C. Decidua vera

D. Decidua parietalis

**Answer: A**

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**36.** Initiation of gastrulation in humans is marked by formation of

A. differentiation of inner cell mass into epiblast and hypoblast

B. formation of three germ layers

C. formation of primitive streak

D. formation of chorionic villi

**Answer: C**

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**37.** find the odd one w.r.t germ layers which form the following structures?

A. Gonads

B. Adrenal cortex

C. kidneys

D. Iris muscle

**Answer: D**

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**38.** presence of which hormone is diagnosed in Gravidex test?

A. hCG

B. hPL

C. Chorionic thyrotropin

D. Estrogen

**Answer: A**

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**39.** Which of the following statements is incorrect?

A. Placenta is formed by structures contributed by both mother and fetus

B. TORCH infections are major cause of miscarriage in first trimester

C. Relaxin facilitates parturition by softening bones of public symphysis

D. There is no mixing of material and fetal blood occur during foetal development

**Answer: C**

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**40.** which of the following is correct regarding embryonic development?

A. Heart sound of the foetus can be heard using stethoscope usually after four

week of gastation

B. First movement of foetus occurs just after 3rd month

C. Implantation occur at morula stage

D. Allantois serve as site of blood cell synthesis in foetal stage

**Answer: A**

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**41.** Descending of testis into scrotal sac occur during

A. 3rd month of gestation

B. 5th month of gestation

C. 7th month of gestation

D. after birth of foetus

**Answer: C**

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**42.** Which extraembryonic membranes in human prevents dissicaation of embryo inside uterus?

A. Amnion

B. Chorion

C. Allantois

D. Yock sac

**Answer: A**

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