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- Y3		v	V.M.G.R	R.R SRI SA	RADA SA	AKTHI MAT. H	IR. SEC. SCH	OOL	
	STD: X	II		BIC	DLOGY	SET-3 (B L-2	2,8 Z L -3,9)	MARKS-50	
No.	I.CHOOSE THE CORRECT ANSWER :						, ,	35X1=35	
	1. Which of the molecule have the ability to convert a precursorb in the cell of peaplant?								
	a)	Le; le		b) GA	[	c)Le	d) le	*	
	I). 0.2 to 2 II) Less tha III) 0.002 t IV) 0.002 t	Cc .00 mm an 0.002 to 0.02 m to 0.2 m	olumn - I 2 mm nm m	Column - I i) Slit s ii) Clay iii) Sar iv) Loa	l oil yey soil ndy soil	Column I and C			
	a) ii	iii	i	i∨	i	(			
	b)	iv	i	iii	ii	6			
	C)	111	ii	i	iv				
	d)	d) None of the above				XV			

3.Assertion: Vegetables are important part of healthy eating.

Reason: Vegetables are succulent structures of plants with pleasant aroma and flavours.

- a) Assertion is correct, Reason is wrong
- b) Assertion is wrong, Reason is correct
- c) Both are correct and reason is the correct explanation for assertion.
- d) Both are correct and reason is not the correct explanation for assertion.
- 4. Match Column I with Column II

Column I Column II

- i) William S. Gaud I) Heterosis
- ii) Shull II) Mutation breeding
- iii) Cotton Mather III) Green revolution
- iv) Muller and Stadler IV) Natural hybridization
  - a) i I, ii II, iii III, iv IV
  - c) i IV, ii II, iii I, iv IV

b) i - III, ii - I, iii - IV, iv - IId) i - II, ii - IV, iii - III, iv - I 5. Deforestation does not lead to a) Quick nutrient cycling b) soil erosion c) alternation of local weather conditions d) Destruction of natural habitat weather conditions 6. Solar energy used by green plants for photosynthesis is only b) 2 – 10% c) 3 – 10% a) 2 - 8%d) 2 – 9% 7. Which of the following is / are not the mechanism of decomposition a) Eluviation b) Catabolism c) Anabolism d) Fragmentation 8. Arrange the correct sequence of ecological hierarchy starting from lower to higher level. a) Individual organism  $\rightarrow$  Population Landscape  $\rightarrow$  Ecosystem b) Landscape  $\rightarrow$  Ecosystem  $\rightarrow$  Biome  $\rightarrow$  Biosphere c) community  $\rightarrow$  Ecosystem  $\rightarrow$  Landscape  $\rightarrow$  Biome d) Population  $\rightarrow$  organism  $\rightarrow$  Biome  $\rightarrow$  Landscape 9. Ecology is the study of an individual species is called i) Community ecology ii) Autecology iii) Species ecology iv) Synecology c) i and iv only b) ii only d) ii and iii only a) i only 10. Solidifying agent used in plant tissue culture is a) Nicotinic acid b) Cobaltous chloride c) EDTA d) Agar 11. The time duration for sterilization process by using autoclave is \_\_\_\_\_ minutes and the temperature is \_\_\_\_ a) 10 to 30 minutes and  $125^{\circ}$  C b) 15 to 30 minutes and 121° C c) 15 to 20 minutes and 125° C d) 10 to 20 minutes and 121° C 12. Restriction enzymes are a. Not always required in genetic engineering Essential b. tools in genetic engineering c. Nucleases that cleave DNA at specific sites d. both b and c 13. Plasmids are a. circular protein molecules b. required by bacteria c. tiny bacteria d. confer resistance to antibiotics 14. Match list I with list II List II List I A. A pair of chromosomes extra with i) monosomy diploid B. One chromosome extra to the diploid ii) tetrasomy C. One chromosome loses from diploid iii) trisomy D. Two individual chromosomes lose from iv) double monosomy diploid a) A-i, B-iii, C-ii, D-iv b) A-ii, B-iii, C-iv, D-i c) A-ii, B-iii, C-i, D-iv d) A-iii, B-ii, C-i, D-iv 15. Which one of the following is an example of polygenic inheritance? a) Flower colour in *Mirabilis Jalapa* b) Production of male honey bee c) Pod shape in garden pea d) Skin Colour in humans

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16.Choose the correct statement(s) about tenuinucellate ovule a) Sporogenous cell is hypodermal b) Ovules have fairly large nucellus c) sporogenous cell is epidermal d) ovules have single layer of nucellus tissue 17. Which of the following represent megagametophyte b)Embryo sac c)Nucellus d)Endosperm a) Ovule 18. Animals giving birth to young ones: a) Oviparous b) Oviviviparous c) Viviparous d) Both a and b 19. Human beings are unisexual animals, the type of Syngamy in human beings is \_\_\_\_\_ a) autogamy b) exogamy c)hologamy d) paedogamy 20. Which among the following animlas exhibits Oviviviparity? a)Frog b) shark c)sheep d)hen 21. The glandular accessory organ which produces the largest proportion of semen is a. Seminal vesicle b. Bulbourethral gland c. Prostate gland d. Mucous gland 22. The male homologue of the female clitoris is b. Penis a. Scrotum c. Urethra d.Testis 23.Identify the correct statements from the following (a) Chlamydiasis is a viral disease. (b) Gonorrhoea is caused by a spirochaete bacterium, *Treponema palladium*. (c) The incubation period for syphilis is is 2 to 14 days in males and 7 to 21 days in females. (d) Both syphilis and gonorrhoea are easily cured with antibiotics. 24.A contraceptive pill prevents ovulation by (a) blocking fallopian tube (b) inhibiting release of FSH and LH (c) stimulating release of FSH and LH (d) causing immediate degeneration of released ovum. 25.Choose the correctly match pair. a) Amphetamines - Stimulant b) LSD - Narcotic c) Heroin - Psychotropic d) Benzodiazepine - Pain killer 26. A 30 year old woman has bleedy diarrhoea for the past 14 hours, which one of the following organisms is likely to cause this illness? a) Streptococcus pyogens b)Clostridium difficile c)Shigella dysenteriae d)Salmonella enteritidis 27. B cells that produce and release large amounts of antibody are called d) killer cells a) Memory cells b) Basophils c) Plasma cells 28.Cry toxins obtained from Bacillus thuringiensis are effective against for\_

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a) Mosquitoes	b) Flies	c) Nematodes	d) Bollworms							
29. Cyclosporin – A is an	immunosuppressiv	ve drug produced from								
a) Aspergillus nige	er	b) Manascus purpureus								
c) Penicillium no	tatum	d) Trichoderma polysporur	n							
30. The genetic defect ade	nosine deaminase	deficiency may be cured per	manently by							
a) Enzyme replace	ment therapy									
b) periodic infusion of genetically engineered lymphocytes having ADA cDNA										
c) administering adenosine deaminase activators										
d) introducing bo	ne marrow cells pr	oducing ADA into embryo a	t an early stage of							
development.										
31. The first clinical gene therapy was done for the treatment of										
a) AIDS	b) Cancer	c) Cystic fibrosis	· · · · · · · · · · · · · · · · · · ·							
32.Recombinant Factor VIII is produced in the cells of the Chinese Hamster										
a) Liver cells	b) blood cells	c) ovarian cells	d) brain cells.							
33.PCR proceeds in three d	listinct steps govern	ed by temperature, they are in	order of							
a) Denaturation, Annealing, Synthesis b) Synthesis, Annealing, Dena										
c) Annealing, Synth	0 5	, ,	on, Synthesis, Annealing							
		n Monascus purpureus and	5							
chloestrol level.	det obtained non	in monascus purpureus and	it helps to reduce blood							
		( is Humulin d) X is Kanam	nycin							
35. The phenomenon of "Industrial Melanism" demonstrates										
a) Natural selection	l	b) induced mutation								
c) reproductive isol	ation	d) geographical isolat	ion							

# **II.ANSWER THE FOLLOWING :**

3X5=15

**36.** Differentiate incomplete dominance and codominance.

#### OR

Bring out the inheritance of chloroplast gene with an example.

37. What are the strategies to be implemented in India to attain total reproductive health?

## OR

Explain the best suited type followed by plant breeders at present?

38.One of the applications of biotechnology is 'gene therapy" to treat a person born with a hereditary disease

i) What does "gene therapy" mean?

ii) Name the hereditary disease for which the first clinical gene therapy was used.

iii) Mention the steps involved in gene therapy to treat this disease.

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OR

PCR is a useful tool for early diagnosis of an Infectious disease. Elaborate.