Register	(September 1)	1025.6	2018	1	
Number					

## SCIENCE (Theory) — Paper II (Botany and Zoology)

Time Allowed : $2\frac{1}{2}$ Hours ]	[ Maximum Marks : 100
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		SECTION - A				
	BOTANY					
		( Marks : 50 )				
Cho	oose and write the correct	t answer:	$5\times 1=5$			
1.	. A symbiotic nitrogen fixing bacterium is					
	a) Rhizobium	b)	Bacillus ,			
	c) Nitrobacter	d)	Pseudomonas.			
2.	The pollution caused by	the activities of	man is called			
	a) Hydrogenic	b)	Pathogenic			
	c) Anthropogenic	d)	Phytogenic.			
3.	An example for stone fr	uit is				
	a) apple	b)	cucumber			
	c) mango	e: d)	tomato.			
4.	The concept of two pigr	nent systems wa	s proposed by			
	a) Arnon	b)	Hill			
	c) Calvin	d)	Emerson.			
5.	5. The chromosomal number is more than 1000 in.					
	a) ophioglossum	b)	cycas			
	c) man	d)	whale.			

II.	Fill i	n the blanks with suitable terms: $5 \times 1 = 5$				
	6.	The process of enrichment of nutrients in water is known as				
	7.	The term 'Vaccine' was coined by				
	8.	An antibiotic obtained from Bacillus subtilis is				
	9.	The pungent principle of ginger is				
	10.	Hybrid vigour is also called as				
III.	Ans	wer any five of the following questions in one or two sentences each:				
		$5 \times 2 = 10$				
	11.	What is tissue culture?				
	12.	Draw a labelled sketch of a multiple fruit.				
	13.	Why is ABA called stress hormone?				
	14.	What is Gram Stain?				
	15.	Mention any two drugs used in Siddha Medicine.				
	16.	What is meant by Eutrophication?				
8-	17.	What is pappus? Mention its significance.				
	18.	Define photolysis of water.				
	19.	Draw a succulant Xerophyte and label its parts.				
	20.	Name two macronutrients. Write their physiological role.				
IV. Write short answers for any four of the following questions each in 1 Draw diagrams wherever necessary. Question No. 22 is compulsory:						
	21.	Enumerate the control measures of noise pollution.				
	22.	Draw a neat labelled diagram of ultrastructure of chloroplast.				
	23.	Write about aggregate fruit with an example.				
	24.	Explain asexual reproduction in Penicillium.				
	25.	Write a note on the special types of chromosomes.				
	26.	Write notes on the following:				
		a) Hybridization b) Polyploid breeding.				
		Describe Watson and Crick model of DNA.				
V.		te a detailed answer for any one of the following questions in 200 words. We diagrams wherever necessary. $1 \times 10 = 10$				
	28.	Explain the mechanism of aerobic respiration.				
	29.	Explain the stages of hypogeal germination in Maize.				

## SECTION - B

## ZOOLOGY

(Marks: 50)

VI.	Cho	noose and write the correct answer: $5 \times 1 = 5$				
	30.	. In frog's brain the fourth ventricle is the cavity present inside the				
		a)	Cerebrum	b)	Cerebellum	
		c)	Medulla oblongata	d)	Midbrain.	
	31.	. Plasma protein that control osmotic pressure is				
		a)	Serum albumin	b)	Serum Globulin	
		c)	Fibrinogen	d)	Prothrombin.	
	32.	32. If the yolk is distributed evenly throughout the cytoplasm, the eggs are called				
		a)	Isolecithal	b)	Telolecithal	
	1.4	c)·	Alecithal	d)	Centrolecithal.	
	33. A genetic problem which causes lack of blood clot is called				blood clot is called	
		a)	Haemophilia	b)	Thrombosis	
		c)	Haematopoiesis	d)	Embolus.	
	34.	. Anorexia is the symptom of				
		a)	CHD	b)	RHD	
		c)	Hypertension	d)	Renal failure.	
VII.			e blanks with suitable terms:		$5\times 1=5$	
1000	35.	A c:		the	entry of food into the trachea	
	36.	Indian Government launched a special scheme 'Project Tiger' in the year				
	37.	7. Introduction of a new gene into the cell is called				
	38.					
	39.	Peop	ele with the blood group 'O' are	called	1	

VIII. Answer any five of the following questions in one or two sentences each:

 $5 \times 2 = 10$ 

- 40. What is bronchitis?
- 41. Write very short note on dwarfism.
- 42. Draw and label the cross-section of an artery.
- 43. What is amphimixis?
- 44. Define gastrulation.
- 45. Expand (i) IUCN and (ii) BSP.
- 46. Mention any four important sanctuaries in Tamil Nadu.
- 47. What is polyphagia?
- 48. What is antibody?
- 49. What is dialysis?

IX. Write short answers for any four of the following questions in 100 words each.

Draw diagrams wherever necessary. Question No. 53 is compulsory.

 $4 \times 5 = 20$ 

- 50. Describe the urinogenital system of male frog.
- 51. Write short note on cutaneous respiration in frog.
- 52. Explain the structure and function of an intestinal villus in man.
- 53. Draw a neat labelled sketch of Hen's egg.
- 54. Explain man in the biosphere.
- 55. Write a note on renal failure.
- 56. Write short note on organ transplantation.
- X. Write detailed answer for any *one* of the following in 200 words. Draw diagrams wherever necessary:  $1 \times 10 = 10$ 
  - 57. Explain the structure and function of Thyroid gland.
  - 58. Describe the development of 'Dolly' ( Diagram can be given in the form of a flowchart ).