College: S. S. College, Jehanabad

Department: Zoology

Class: B.Sc. Part 1

Subject: Zoology / Assignment

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Last date of assignment submission: 16.05.2020

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दिव्यते ज्ञान ज्योतिसा जगत

S.S.COLLEGE, JEHANABAD

(NAAC Accredited- Grade 'B')

Name:	Class:
Class Roll No.:	Total Marks: 40
Assignment: May 14, 2020	Submission: May 16, 2020

B.Sc. Zoology Part 1 Assignment

This assignment is for evaluation of students with respect to online classes. Total questions are 40 of total 40 marks, each carrying 1 mark.

__ 1. In all the methods of asexual reproduction

1

(A) offsprings produced are genetically identical to the parents
(B) Offsprings produced are genetically different from the parents
(C) Offsprings produced may or may not be identical to the parents
(D) None of the above

__ 2. The process of releasing the ripe female gamete from the ovary is called _____

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(A) Parturition
(B) ovulation
(C) fertilization
(D) implantation

__ 3. The process of development of a haploid offspring from a haploid egg is called as __

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(A) haploid parthenogenesis
(B) diploid parthenogenesis
(C) single parthenogenesis
(D) double parthenogenesis

__ 4. Diploid parthenogenesis occurs in

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(A) aphids
(B) honeybees
(C) mosquitoes
(D) hydra

__ 5. Partheogenesis has the advantage of accelerating the normal

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(A) reproductive rate
(B) respiratory activity
(C) flowering
(D) growth

__ 6. A few insects do not have males, and they have no sexual phase. They essentially depend on self reproduction is known as

1

(A) complete parthenogenesis
(B) incomplete parthenogenesis
(C) artificial parthenogenesis
(D) none of these

_ 1 7. Incomplete parthenogenesis involves two generation which are parthenogenesis generation

(A) asexual generation
(B) sexual generation
(C) alternate asexual and sexual generation
(D) none of these

_ 1 8. Development of egg can be induced by merely pricking the egg with needle. Is it true?

(A) yes, it is true.
(B) No, it can't.
(C) occasionally, it may occur.
(D) needs speciliazed nutrients.

_ 1 9. By physical means, parthenogenesis is induced if an egg is transferred from -30 to -10°C.

(A) yes, it is possible.
(B) no, it is not possible.
(C) needs highly rich medium
(D) can't say

_ 1 10. The chemicals that are responsible for the parthenogenesis of eggs are

(A) Chloroform and chlorides
(B) urea and sucrose
(C) fat solvents and strychnine
(D) all of the above

_ 1 11. Parthenogenesis is important for the following reasons

(A) parthenogenesis helps in determining sex of an individual in honey bees and wasps.
(B) variations from populations are eliminated by parthenogenesis.
(C) it results in polyploidy of an organism
(D) all of the above

_ 1 12. Correct sequence of cell stage in spermatogenesis

(A) spermatocytes → spermatids → spermatogonia → spermatozoa
(B) spermatogonia → spermatids → spermatocytes → spermatozoa
(C) spermatogonia → spermatocytes → spermatids → spermatozoa
(D) spermatocytes → spermatogonia → spermatids → spermatozoa

_ 1 13. In spermatogenesis, the phase of maturation involves

(A) The formation of oogonia from the spermatocytes through meiosis
(B) The formation of spermatids from primary spermatocytes through meiosis
(C) The growth of spermatogonia into primary spermatocytes
(D) The formation of spermatogonia from gonocytes through mitosis

_ 1 14. Which part of sperm provides energy for its movement?

(A) Head
(B) Tail
(C) Middle piece
(D) Acrosome

_ 1 15. How many secondary spermatocytes are required to form 400 spermatozoa?

(A) 100
(B) 200
(C) 400
(D) 800

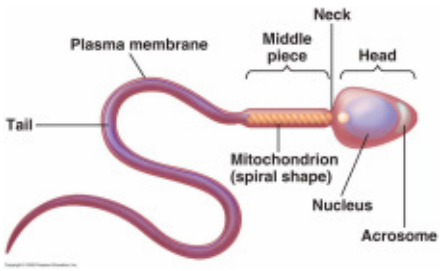
_ 1 16. Spermatogenesis is induced by

(A) MSH
(B) TSH
(C) FSH
(D) ACTH

_ 1 17. The lytic enzyme released by sperm is

(A) acrosome
(B) ligase
(C) hyaluronidase
(D) none of these

_ 1 18.



Middle piece of the mammalian sperm contains

(A) centriole
(B) mitochondria
(C) nucleus and mitochondria
(D) centriole and mitochondria

_ 1 19. The actual genetic part of a sperm is its

(A) head
(B) acrosome
(C) tail
(D) middle piece

_ 1 20. When a female ovulates, in what phase of division is the oocyte?

(A) Prophase I
(B) Prophase II
(C) Metaphase I
(D) Metaphase II

_ 1 21. What is the "Dictyate state?"

(A) A meiosis stabilizing factor
(B) Pre-vitellegenic stage in fetal development
(C) An oogenetic ‘stasis’ between embryo and puberty
(D) The primordial follicle

_ 1 22. How long does spermatogenesis take in adult humans?

(A) 7 months
(B) 25 weeks
(C) 64 days
(D) 72 hours

_ 1 23. What is a key difference between spermatogenesis and oogenesis?

(A) Spermatogenesis results in 2 sperm; oogenesis results in only 1 egg.
(B) Spermatogenesis results in only 1 sperm; oogenesis results in 2 eggs.
(C) Spermatogenesis results in only 1 sperm; oogenesis results in 4 eggs.
(D) Spermatogenesis results in 4 sperm; oogenesis results in only 1 egg.

_ 1 24. Why is meiosis required for germ cell formation, yet is never used by somatic cells?

(A) Meiosis is the cell division process that produces haploid products.
(B) Meiosis is a process that produces one sperm and one egg from each dividing germ cell.
(C) Meiosis is a specialized, highly efficient process of cell division, which is used because of the large numbers of germ cells required by an organism.
(D) Meiosis is a specialized form of cell division that produces four diploid cells instead of just two, facilitating the production of large numbers of germ cells.

__ 1 25. Secretion of Müllerian-inhibiting substance by Sertoli cells:

(A) causes the Müllerian ducts to develop into the oviducts
(B) causes the Müllerian ducts to develop into Wolffian ducts
(C) causes the Wolffian duct to develop into the vas deferens
(D) causes the Müllerian duct to regress by apoptosis in males

__ 1 26. Which one of the following provides rapid block to polyspermy during sea urchin fertilization?

(A) Wave of calcium release
(B) Cortical granules release the contents
(C) Depolarization of egg membrane
(D) Activation of phospholipase C zeta

__ 1 27. Polar bodies are formed during _____

(A) spermatogenesis
(B) oogenesis
(C) gametogenesis
(D) spermatelosis

__ 1 28. Nobenkern is a part of _____

(A) foetus
(B) Graafian follicle
(C) human ovum
(D) human sperm

__ 1 29. What do you mean by the term spermatelosis?

(A) Conversion of spermatids to sperms
(B) Conversion of spermatogonium to spermatids
(C) Conversion of spermatid to spermogonium
(D) Conversion of primary spermatocyte to secondary spermatocyte

__ 1 30. Hormone inhibin is secreted by _____

(A) Theca cells
(B) Zona pellucida
(C) Granulosa cells
(D) Corpus luteum

__ 1 31. The follicle that ruptures at the time of ovulation promptly fills with blood forming is _____

(A) Corpus albicans
(B) Corpus luteum
(C) Corpus haemorrhagium
(D) Corpus callosum

__ 1 32. Graafian follicle is maintained by _____

(A) FSH (B) Prolactin

(C) Estrogen (D) Androgen

__ 1 33. During embryonic development, the establishment of polarity along anterior/posterior, dorsal/ventral or medial/lateral axis is called as _____

(A) anamorphosis (B) organizer phenomena

(C) pattern formation (D) axis formation

__ 1 34. Which of the following defines the process by which the entry of one sperm into an oocyte prevents other sperms from fertilizing the same egg?

(A) The induction reaction (B) Determination

(C) Differentiation (D) The cortical reaction

__ 1 35. The region of the egg that contains more ribosomes, more mitochondria, less yolk and is metabolically more active is named as _____

(A) vegetal pole (B) center of egg

(C) distal pole (D) animal pole

__ 1 36. The protective coat around the egg is called _____

(A) egg membrane (B) acrosomal membrane

(C) fertilization membrane (D) cell membrane

__ 1 37. Aquatic animals in which fertilization occurs in water are said to be _____

(A) viviparous without fertilization. (B) oviparous with external fertilization.

(C) viviparous with internal fertilization. (D) oviparous with internal fertilization.

__ 1 38. Does increase in calcium within the oocyte at sperm penetration lead to a destruction of MPF (maturation promoting factor)?

(A) No (B) yes

(C) can't say (D) MPF can't be destroyed

__ 1 39. In birds, fertilization takes place in _____

(A) cloacal chamber
(B) gonadal chamber
(C) oviduct
(D) ovary

__ 1 40. Which of the following mechanism are thought to be principally responsible for the calcium increase in the oocyte at sperm penetration.

(A) Release from sperm of a soluble PLC molecule during sperm fusion with the oocyte plasma membrane.
(B) Binding of sperm to a receptor on the surface of the oocyte that initiates a PLC release in the oocyte.
(C) Direct release of calcium from within the sperm into the oocyte.
(D) Leakage of calcium into the oocyte from a pore created by sperm penetration.

Name: ***Class:***

Saturday, May 16, 2020 ***Total Marks: 40***

B.Sc. Zoology Part 1 Assignment Answer Sheet

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दिव्यते ज्ञान ज्योतिसा जगत

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_1	1.	(A)	(B)	(C)	(D)	_1	19.	(A)	(B)	(C)	(D)	_1	37.	(A)	(B)	(C)	(D)
_1	2.	(A)	(B)	(C)	(D)	_1	20.	(A)	(B)	(C)	(D)	_1	38.	(A)	(B)	(C)	(D)
_1	3.	(A)	(B)	(C)	(D)	_1	21.	(A)	(B)	(C)	(D)	_1	39.	(A)	(B)	(C)	(D)
_1	4.	(A)	(B)	(C)	(D)	_1	22.	(A)	(B)	(C)	(D)	_1	40.	(A)	(B)	(C)	(D)
_1	5.	(A)	(B)	(C)	(D)	_1	23.	(A)	(B)	(C)	(D)						
_1	6.	(A)	(B)	(C)	(D)	_1	24.	(A)	(B)	(C)	(D)						
_1	7.	(A)	(B)	(C)	(D)	_1	25.	(A)	(B)	(C)	(D)						
_1	8.	(A)	(B)	(C)	(D)	_1	26.	(A)	(B)	(C)	(D)						
_1	9.	(A)	(B)	(C)	(D)	_1	27.	(A)	(B)	(C)	(D)						
_1	10.	(A)	(B)	(C)	(D)	_1	28.	(A)	(B)	(C)	(D)						
_1	11.	(A)	(B)	(C)	(D)	_1	29.	(A)	(B)	(C)	(D)						
_1	12.	(A)	(B)	(C)	(D)	_1	30.	(A)	(B)	(C)	(D)						
_1	13.	(A)	(B)	(C)	(D)	_1	31.	(A)	(B)	(C)	(D)						
_1	14.	(A)	(B)	(C)	(D)	_1	32.	(A)	(B)	(C)	(D)						
_1	15.	(A)	(B)	(C)	(D)	_1	33.	(A)	(B)	(C)	(D)						
_1	16.	(A)	(B)	(C)	(D)	_1	34.	(A)	(B)	(C)	(D)						
_1	17.	(A)	(B)	(C)	(D)	_1	35.	(A)	(B)	(C)	(D)						
_1	18.	(A)	(B)	(C)	(D)	_1	36.	(A)	(B)	(C)	(D)						