

# Mastering Biology With Tripti Kakkar

## DPP - Daily Practice Problems

### Chapter-wise Sheets

Date :

Start Time :

End Time :

# BIOLOGY

## CB25

SYLLABUS : Human Reproduction

Max. Marks : 180

Marking Scheme : + 4 for correct & (-1) for incorrect

Time : 60 min.

INSTRUCTIONS : This Daily Practice Problem Sheet contains 45 MCQs. For each question only one option is correct. Darken the correct circle/ bubble in the Response Grid provided on each page.

- Breast feeding suspends pregnancy due to
  - post pregnancy lower levels of FSH and LH
  - post pregnancy higher levels of FSH and LH which put negative check on ovulation
  - inhibiting the release of LH by prolactin and thus countering the effects of LH on the ovarian follicles
  - increasing the release of inhibin by prolactin and thus countering the effects of FSH on the ovarian follicles
- The human embryo, with 8 to 16 blastomere is called
  - Morula
  - Blastula
  - Gastrula
  - Foetus
- A person which shows the secondary sexual characters of both male and female is called –
  - Intersex
  - Hermaphrodite
  - Bisexual
  - Gynandromorph
- Which one of the following is the correct matching of the events occurring during menstrual cycle?
  - Proliferative phase: Rapid regeneration of myometrium and maturation of Graafian follicle.
  - Development of corpus luteum : Secretory phase and increased secretion of progesterone.
  - Menstruation: Breakdown of myometrium and ovum not fertilised.
  - Ovulation: LH and FSH attain peak level and sharp fall in the secretion of progesterone.
- The second maturation division of the mammalian ovum occurs:
  - in the graafian follicle following the first maturation division
  - shortly after ovulation before the ovum makes entry into the Fallopian tube
  - until after the ovum has been penetrated by a sperm
  - until the nucleus of the sperm has fused with that of the ovum

RESPONSE  
GRID

1. (a)(b)(c)(d) 2. (a)(b)(c)(d) 3. (a)(b)(c)(d) 4. (a)(b)(c)(d) 5. (a)(b)(c)(d)

Space for Rough Work

# Mastering Biology With Tripti Kakkar

B-98

DPP/ CB25

6. Foetal ejection reflex in human female is induced by  
(a) release oxytocin from pituitary  
(b) fully developed foetus and placenta  
(c) differentiation of mammary glands  
(d) pressure exerted by amniotic fluid
7. Which one of the following statements about human sperm is correct?  
(a) Acrosome has a conical pointed structure used for piercing and penetrating the egg, resulting in fertilisation  
(b) The sperm lysine in the acrosome dissolve the egg envelope facilitating fertilisation  
(c) Acrosome serves as a sensory structure leading the sperm towards the ovum  
(d) Acrosome serves no particular function
8. Sertoli cells are found in  
(a) ovaries and secrete progesterone  
(b) adrenal cortex and secrete adrenaline  
(c) seminiferous tubules and provide nutrition to germ cells  
(d) pancreas and secrete cholecystokinin
9. The phase of menstrual cycle in humans that lasts for 7-8 days, is  
(a) follicular phase (b) ovulatory phase  
(c) luteal phase (d) menstruation
10. Cessation of menstrual cycle in women is called  
(a) menopause (b) lactation  
(c) ovulation (d) parturition
11. In human female the blastocyst  
(a) Forms placenta even before implantation  
(b) Gets implanted into uterus 3 days after ovulation  
(c) Gets nutrition from uterine endometrial secretion only after implantation  
(d) Gets implanted in endometrium by the trophoblast cells
12. Bulbourethral gland is present in  
(a) Males and is another name for Uterus masculina  
(b) Females and is another name for Bartholin's gland  
(c) Males and is another name for Cowper's gland  
(d) None of these
13. Which one of the following are rich in fructose, calcium and some enzymes?  
(a) Male accessory glands  
(b) Liver  
(c) Pancreas  
(d) Salivary glands
14. Umbilical cord has  
(a) Two arteries carrying blood to placenta and one vein returning blood to foetus  
(b) One artery carrying blood to placenta and two veins returning blood to foetus  
(c) Two arteries bringing blood to foetus and one vein carrying blood to placenta  
(d) One artery bringing blood to foetus and two veins carrying blood to placenta
15. Which of the following induces parturition ?  
(a) Vasopressin  
(b) Oxytocin  
(c) Growth hormone  
(d) Thyroid stimulating hormone
16. What happens during fertilisation in humans after many sperms reach close to the ovum?  
(a) Cells of corona radiata trap all the sperms except one  
(b) Only two sperms nearest the ovum penetrate zona pellucida  
(c) Secretions of acrosome helps one sperm enter cytoplasm of ovum through zona pellucida  
(d) All sperms except the one nearest to the ovum lose their tails
17. The part of fallopian tube closest to the ovary is  
(a) isthmus (b) infundibulum  
(c) cervix (d) ampulla
18. The chemical substance found in the surface layer of cytoplasm of spermatozoa is:  
(a) fertilizin (b) agglutinin  
(c) antifertilizin (d) hyaluronidase

RESPONSE  
GRID

- |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|
| 6. (a) (b) (c) (d)  | 7. (a) (b) (c) (d)  | 8. (a) (b) (c) (d)  | 9. (a) (b) (c) (d)  | 10. (a) (b) (c) (d) |
| 11. (a) (b) (c) (d) | 12. (a) (b) (c) (d) | 13. (a) (b) (c) (d) | 14. (a) (b) (c) (d) | 15. (a) (b) (c) (d) |
| 16. (a) (b) (c) (d) | 17. (a) (b) (c) (d) | 18. (a) (b) (c) (d) |                     |                     |

Space for Rough Work

19. Which of the following diseases is caused by the under secretion of cortisol?  
 (a) Anaemia  
 (b) Addison's disease  
 (c) Hyperglycemia  
 (d) Mental illness or retardation
20. Reabsorption of chloride ions from glomerular filtrate in kidney tubule occurs by  
 (a) Active transport (b) Diffusion  
 (c) Osmosis (d) Brownian movement
21. If for some reason, the vasa efferentia in the human reproductive system get blocked, the gametes will not be transported from  
 (a) testes to epididymis  
 (b) epididymis to vas deferens  
 (c) ovary to uterus  
 (d) vagina to uterus
22. The nutritive cells found in seminiferous tubules are  
 (a) Leydig's cells (b) atretic follicular cells  
 (c) Sertoli cells (d) chromaffin cells.
23. Seminal plasma in humans is rich in  
 (a) fructose and calcium but has no enzymes  
 (b) glucose and certain enzymes but has no calcium  
 (c) fructose and certain enzymes but poor in calcium  
 (d) fructose, calcium and certain enzymes
24. The function of the secretion of prostate gland is to  
 (a) inhibit sperm activity  
 (b) attract sperms  
 (c) stimulate sperm activity  
 (d) none of these
25. The head of the epididymis at the head of the testis is called  
 (d) cauda epididymis  
 (b) vas deferens  
 (c) caput epididymis  
 (d) gubernaculum
26. Which part of ovary in mammals acts as an endocrine gland after ovulation?  
 (a) Stroma  
 (b) Germinal epithelium  
 (c) Vitelline membrane  
 (d) Graafian follicle
27. The female external genitalia include  
 (i) Ovary (ii) Mammary gland  
 (iii) Mons pubis (iv) Clitoris  
 (a) (i) and (ii) (b) (ii) and (iii)  
 (c) (iii), (iv) and (v) (d) (ii), (iii) and (v)
28.  $2n = 16$  is in a primary spermatocyte which is in metaphase of first meiotic division. What shall be the total number of chromatids in each of the secondary spermatocyte?  
 (a) 16 (b) 24  
 (c) 32 (d) 8
29. In humans, at the end of the first meiotic division, the male germ cells differentiate into the  
 (a) spermatids  
 (b) spermatogonia  
 (c) primary spermatocytes  
 (d) secondary spermatocytes
30. The sperms undergo physiological maturation, acquiring increased motility and fertilizing capacity in  
 (a) seminiferous tubules  
 (b) vasa efferentia  
 (c) epididymis  
 (d) vagina
31. At what stage of life is oogenesis initiated in a human female?  
 (a) At puberty  
 (b) During menarch  
 (c) During menopause  
 (d) During embryonic development
32. The middle piece of the sperm contains  
 (a) proteins (b) mitochondria  
 (c) centriole (d) nucleus

**RESPONSE  
GRID**

- |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|
| 19. (a) (b) (c) (d) | 20. (a) (b) (c) (d) | 21. (a) (b) (c) (d) | 22. (a) (b) (c) (d) | 23. (a) (b) (c) (d) |
| 24. (a) (b) (c) (d) | 25. (a) (b) (c) (d) | 26. (a) (b) (c) (d) | 27. (a) (b) (c) (d) | 28. (a) (b) (c) (d) |
| 29. (a) (b) (c) (d) | 30. (a) (b) (c) (d) | 31. (a) (b) (c) (d) | 32. (a) (b) (c) (d) |                     |

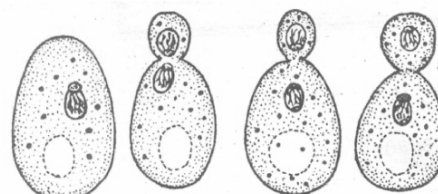
*Space for Rough Work*

# Mastering Biology With Tripti Kakkar

B-100

DPP/ CB25

33. Corpus luteum is developed from  
 (a) Graafian follicle (b) nephrostome  
 (c) oocyte (d) none of these
34. Spermatogenesis is induced by  
 (a) FSH (b) ICSH  
 (c) STH (d) ATH
35. Layers of an ovum from outside to inside is  
 (a) corona radiata, zona pellucida and vitelline membrane  
 (b) zona pellucida, corona radiata and vitelline membrane  
 (c) vitelline membrane, zona pellucida and corona radiata  
 (d) zona pellucida, vitelline membrane and corona radiata
36. Name the hormone that has no role in menstruation.  
 (a) LH (b) FSH  
 (c) Estradiol (d) TSH
37. The time for optimum chances of conception in a woman is \_\_\_\_\_ starting from the day of menstruation.  
 (a) 1<sup>st</sup> day (b) 4<sup>th</sup> day  
 (c) 14<sup>th</sup> day (d) 26<sup>th</sup> day
38. Repair of endometrium is undertaken by  
 (a) LH (b) FSH  
 (c) estrogen (d) prolactin
39. The sex of the foetus will be decided at  
 (a) fertilization by male gamete  
 (b) implantation  
 (c) fertilization by female gamete  
 (d) the start of cleavage
40. Match Column-I with Column-II and select the correct option from the codes given below.
- |                 |                        |
|-----------------|------------------------|
| Column-I        | Column-II              |
| A. Cleavage     | (i) Fertilization      |
| B. Morula       | (ii) Mitotic divisions |
| C. Polyspermy   | (iii) Endometric       |
| D. Implantation | (iv) Little mulberry   |
- (a) A-(ii), B-(iv), C-(i), D-(iii)  
 (b) A-(i), B-(iv), C-(ii), D-(iii)  
 (c) A-(iv), B-(ii), C-(i), D-(iii)  
 (d) A-(ii), B-(iv), C-(iii), D-(i)
41. Which part of the sperm plays an important role in penetrating the egg membrane?  
 (a) Allosome (b) Tail  
 (c) Autosome (d) Acrosome
42. Which of the following hormones is not a secretory product of human placenta?  
 (a) Human chorionic gonadotropin  
 (b) Prolactin  
 (c) Estrogen  
 (d) Progesterone
43. After birth, colostrum is released from mammary glands which is rich in  
 (a) fat and low in proteins  
 (b) proteins and low in fat  
 (c) proteins, antibodies and low in fat  
 (d) proteins, fat and low in antibodies
44. The correct sequence in the process of development of human embryo is  
 (a) fertilization—zygote—cleavage—morula—blastula—gastrula  
 (b) fertilization—cleavage—morula—zygote—blastula—gastrula  
 (c) fertilization—zygote—blastula—morula—cleavage—gastrula  
 (d) cleavage—zygote—fertilization—morula—blastula—gastrula
45. The given figure refers to which type of reproduction in yeast?



- (a) Binary fission (b) Budding  
 (c) Layering (d) Fusion

**RESPONSE  
GRID**

- |                  |                  |                  |                  |                  |
|------------------|------------------|------------------|------------------|------------------|
| 33. (a)(b)(c)(d) | 34. (a)(b)(c)(d) | 35. (a)(b)(c)(d) | 36. (a)(b)(c)(d) | 37. (a)(b)(c)(d) |
| 38. (a)(b)(c)(d) | 39. (a)(b)(c)(d) | 40. (a)(b)(c)(d) | 41. (a)(b)(c)(d) | 42. (a)(b)(c)(d) |
| 43. (a)(b)(c)(d) | 44. (a)(b)(c)(d) | 45. (a)(b)(c)(d) |                  |                  |

Space for Rough Work

## DAILY PRACTICE PROBLEM DPP CHAPTERWISE 25 - BIOLOGY

Total Questions	45	Total Marks	180
Attempted		Correct	
Incorrect		Net Score	
Cut-off Score	55	Qualifying Score	60
Success Gap = Net Score – Qualifying Score			
Net Score = (Correct × 4) – (Incorrect × 1)			