

**SOALAN OBJEKTIF**

- 2 Which of the following sequence is the development of the human zygote?  
*Turutan manakah adalah menunjukkan perkembangan zigot pada manusia.*
- F R A Zygote → morula → blastocyst → embryo  
 B Zygote → blastocyst → morula → embryo  
 C Zygote → morula → foetus → embryo  
 D Zygote → embryo → foetus → blastocyst
- 3 What best describes double fertilization?  
*Apakah penerangan terbaik untuk persenyawaan ganda dua?*
- F S A. One male gamete fertilizes two polar nuclei  
*Satu gamet jantan bersenyawa dengan dua nucleus kutub*  
 B. One male gamete fertilizes one egg cell and two fused polar nuclei  
*Satu gamet jantan bersenyawa dengan satu sel telur dan dua nucleus kutub*  
 C. One male gamete fertilizes one egg cell and another male gamete fertilizes two polar nuclei  
*Satu gamet jantan bersenyawa dengan satu sel telur dan gamet jantan yang lain bersenyawa dengan dua nucleus kutub*  
 D. One male gamete fertilizes one egg cell and another male gamete fertilizes one polar nucleus  
*Satu gamet jantan bersenyawa dengan satu sel telur dan gamet jantan yang lain bersenyawa dengan satu nucleus kutub*
- 4 Which hormone will stop the menstrual cycle during pregnant?  
*Hormone yang manakah akan menghentikan kitar haid semasa mengandung?*
- P S A Follicle stimulating hormone (FSH)  
 B Progesterone  
 C Luteinising hormone(LH)  
 D Oestrogen
- 6 Which of the following hormones repairs the endometrium of the uterus after menstruation occur?  
*Hormon yang manakah membaiki lapisan endometrium uterus selepas haid berlaku?*
- P S A Oestrogen hormone  
 B Progesterone hormone  
 C Luteinizing hormone(LH)  
 D Follicle stimulating hormone(FSH)
- 7 Which of the following is **not true** about the formation of identical twins and fraternal twins?  
*Antara berikut yang manakah **tidak benar** tentang pembentukan kembar seiras dan tidak seiras?*

	Identical twins/ <i>kembar seiras</i>	Fraternal twins/ <i>kembar tidak seiras</i>
A	Produced from a single sperm cell which fertilized one ovum <i>Terhasil dari sel sperma tunggal yang disenyawakan oleh satu ovum</i>	Produced from two sperm cells which fertilized two different ovums <i>Terhasil dari dua sel sperma yang disenyawakan oleh dua ovum berbeza</i>

B	Produce two different zygotes <i>Hasilkan dua zigot berbeza</i>	Produce two similar zygotes <i>Hasilkan dua zigot sama</i>
C	Share the same placenta <i>Berkongsi plasenta yang sama</i>	Have two separate placentas <i>Ada dua plasenta berasingan</i>
D	Produce two identical individuals <i>Hasilkan dua individu seiras</i>	Produce two different individuals <i>Hasilkan dua individu berbeza</i>

10 Which of the following hormones stimulates the process of ovulation?  
*Hormone yang manakah merangsang proses pengovulan?*

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- A. Progesterone
- B. Luteinizing hormone(LH)
- C. Follicle stimulating hormone(FSH)
- D. Oestrogen

11 Which of the following statements are **true** about double fertilisation in a plant?  
*Pernyataan manakah benar tentang persenyawaan ganda dua dalam tumbuhan?*

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- I One male gamete nucleus fuses with the nucleus of an egg cell to form an embryo sac  
*Satu nucleus gamet jantan bergabung dengan satu nucleus sel telur untuk membentuk pundi embrio.*
  - II Two haploid nuclei formed in the ovule fuse with two male gamete nuclei  
*Dua nucleus haploid terbentuk di dalam ovul bergabung dengan dua Nucleus gamet jantan*
  - III One male gamete nucleus fuses with the female nucleus to form diploid zygote  
*Satu nucleus gamet jantan bergabung dengan nucleus gamet betina Untuk membentuk zigot diploid*
  - IV Two polar nuclei fuse with one male nucleus to form the endosperm  
*Dua nucleus kutub bergabung dengn satu nucleus jantan untuk Membentuk endosperma.*
- A I and II only
  - B III and IV only
  - C I, II and III onl
  - D II, III and IV only

12 The statements below are related to the reproductive system.  
*Pernyataan dibawah berkaitan dengan slstem pembiakan.*

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- 1.Ovulation does not take place/Pengovulan tidak berlaku**
- 2.Blockage of oviduct/Halangan pada oviduktus**

- The above statements refer to  
*Pernyataan di atas merujuk pada*
- A vasectomy
  - B infertility
  - C fertilization
  - D contraception

13 Diagram 4 shows the changes of progesterone level in a woman.  
*Rajah 4 menunjukkan perubahan aras progesteron seorang wanita.*

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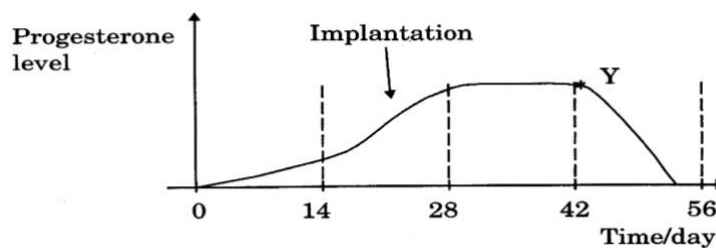


Diagram 4

Which of the following occurs at point Y?  
*Yang manakah antara berikut berlaku di titik Y?*

- A. The embryo continues to grow  
*Embrio terus mengalami pertumbuhan*
- B. The growth of the embryo slows down  
*Pertumbuhan embrio semakin lambat*
- C. The woman has a miscarriage  
*Wanita itu mengalami keguguran*
- D. The woman has an ectopic pregnancy  
*Wanita itu mengalami kehamilan ektopik*

14 Which of the following correctly shows an endocrine gland and its hormone?  
*Antara berikut yang manakah benar tentang kelenjar endokrin dan hormonnya?*

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	Endocrine gland <i>Kelenjar Endokrin</i>	Hormone <i>Hormon</i>
A	Follicle cells	Follicle stimulating hormone(FSH)
B	Ovary	Luteinizing hormone(LH)
C	Pituitary gland	Oestrogen
D	Corpus luteum	Progesterone

15 Diagram 5 is a schematic diagram which shows the stages in ovum formation.

Which of the cells A, B, C or D is an ovum?  
 F S Rajah 5 adalah gambarajah skema yang menunjukkan peringkat dalam pembentukan ovum. Yang manakah antara A, B, C atau D adalah ovum?

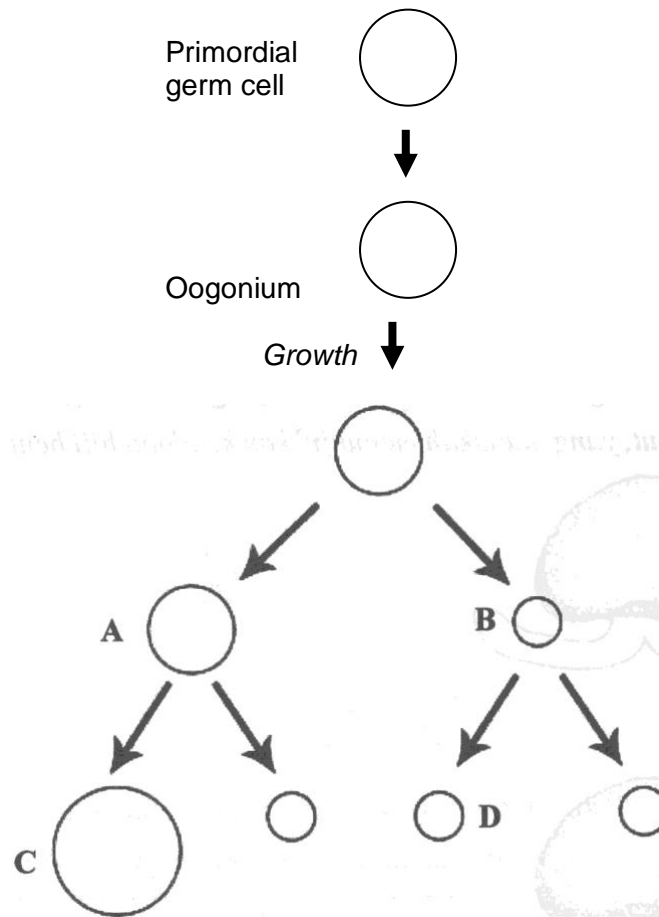


Diagram 5

16 Diagram 6 represents the secretion of two types of hormone during the female menstrual cycle.

F T Rajah 6 mewakili rembesan dua jenis hormon semasa kitar haid wanita.

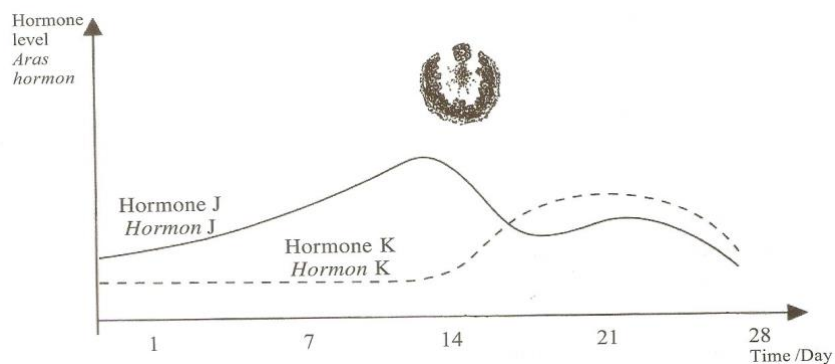


Diagram 6

Which of the following statements are correct?

*Antara pernyataan berikut yang manakah benar?*

- I A rise in the level of hormone J heals and repairs the endometrium lining.  
*Peningkatan hormon J membaiki dinding endometrium*
- II A drop in the level of hormone J induces a drop in the level of hormone K.  
*Penurunan hormon J menyebabkan penurunan hormon K*
- III. A rise in the level of hormone K stimulates ovulation  
*Peningkatan hormon K merangsang pengovulan.*
- IV A drop in the level of hormone K stimulates menstruation  
*Penurunan hormon K merangsang pengeluaran haid*

- A. I and II  
B. I and IV  
C. II and III  
D. III and IV

17 What is the main cause of menopause in female human?

*Apakah sebab berlaku putus haid pada wanita?*

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- A. Ovary secretes less oestrogen  
*Ovari rembeskan kurang estrogen*
- B. Ovary secretes less progesterone  
*Ovari rembeskan kurang progesteron*
- C. Pituitary secretes less luteinising hormone (LH)  
*Pituitari rembeskan kurang hormon peluteinan (LH)*
- D. Pituitary secretes less follicle stimulating hormone (FSH)  
*Pituitari rembeskan kurang hormon perangsang folikel (FSH)*

18 Diagram 7 shows the female reproductive system. Which of the parts A, B, C or D is the place where fertilization occurs?

*Rajah 7 menunjukkan sistem pembiakan seorang wanita. Yang manakah antara A,B,C atau D adalah tempat persenyawaan berlaku?*

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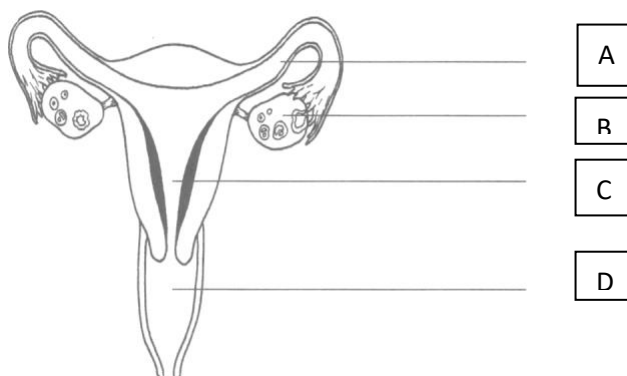


Diagram 7

19 A medical check up was done on a woman. The result shows that both of her oviducts are blocked. Which of the following treatments may help the woman to

A conceive?  
T Seorang wanita menjalani pemeriksaan perubatan. Pemeriksaan itu menunjukkan bahawa kedua-dua oviduktusnya tersumbat. Antara rawatan berikut, yang manakah membolehkan wanita itu hamil?

- A. Intrauterine device(IUD)/alat intra-uterin
- B. Artificial insemination/permanian beradas
- C. In vitro fertilisation(IVF)
- D. Use of fertility drugs/penggunaan ubat kesuburan

20 Diagram 8 shows the growth curve of an organism. Which of the following organism has a growth curve as shown in diagram 8?

F Rajah 8 menunjukkan lengkung pertumbuhan organism. Yang manakah antara  
S organisma berikut mempunyai lengkung pertumbuhan seperti dalam rajah 8?

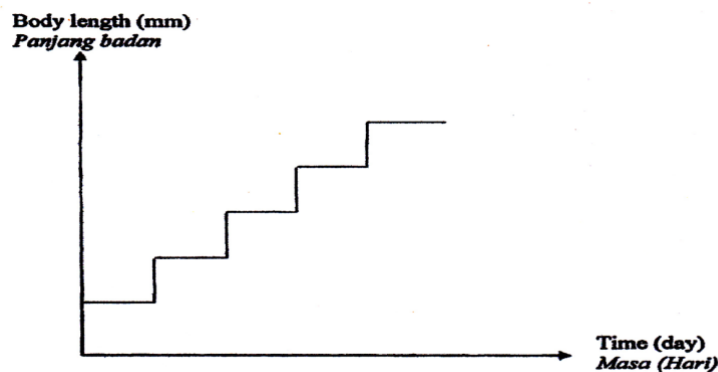


Diagram 8

- A. frog/katak
- B. Earthworm/cacing tanah
- C. Cockroach/lipas
- D. Butterfly/rama-rama

21 In the 16th week, Devi, a pregnant woman is infected with a disease. The infection causes the placenta to stop functioning.

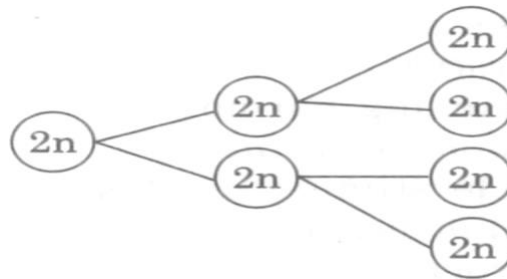
A Pada minggu ke 16, Devi, seorang wanita hamil dijangkiti penyakit. Jangkitan itu  
T menyebabkan plasenta beliau berhenti berfungsi.

Which of the following is the effect of the infection?  
Antara berikut yang manakah kesan jangkitan itu?

- A The foetus is aborted/fetus akan gugur
- B The foetus continues to develop/fetus terus berkembang
- C A Down's syndrome child is born/anak sindrom Down akan dilahirkan
- D The uterine wall continues to thicken/dinding uterus terus menebal

22 Diagram 9 shows a cell which experience mitosis twice. How many new cells are produced after the cell experiences mitosis three times?

A Rajah 9 menunjukkan sel yang mengalami mitosis dua kali. Berapakah bilangan sel  
S baru yang terhasil selepas sel mengalami mitosis tiga kali?



- A. 2  
B. 6  
C. 8  
D. 16

Diagram 9

23 What is the function of contraceptive pills for woman?  
*Apakah fungsi pil pencegah kehamilan untuk wanita?*

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- A. Allow discharge/*membenarkan pengeluaran lendir*  
B. Allows ovulation/*membenarkan ovulasi*  
C. Prevents implantation/*mencegah penempelan*  
D. Prevents the production of follicle/*mencegah penghasilan folikel*

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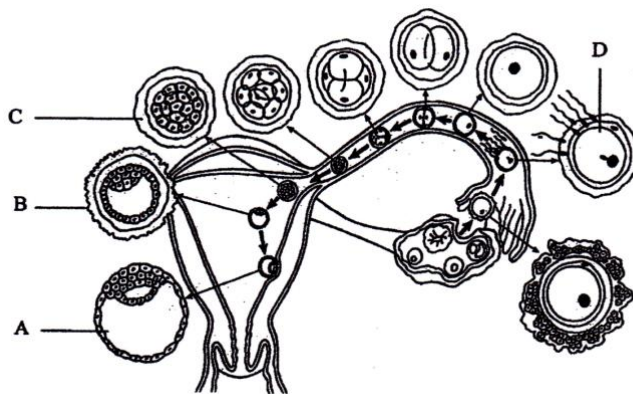


Diagram 10

Diagram 10 shows the stages in the development of a human embryo. Which of the parts labelled A,B,C or D is the blastula stage?

*Rajah 10 menunjukkan peringkat perkembangan embrio manusia. Yang manakah peringkat blastula?*

25 Hamshavani and Hamshavalli are female identical twins. Which is true about fertilization that occurs to form identical twins?

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*Hamshavani dan Hamshavalli adalah kembar seiras perempuan. Yang manakah benar mengenai persenyawaan yang berlaku untuk menghasilkan kembar seiras?*

- A. Two sperms and two ova forming two zygote  
*Dua sperma dan dua ovum membentuk dua zigot.*  
B. Two sperms and one ovum forming two zygote.  
*Dua sperma dan satu ovum membentuk dua zigot.*  
C. Two sperms and one ovum forming a zygote which divides into two.  
*Dua sperma dan satu ovum membentuk zigot yang membahagi dua.*  
D. One sperm and one ovum forming a zygote which divides into two.  
*Satu sperma dan satu ovum membentuk zigot yang membahagi dua.*

- 26 Figure 11 shows the different levels of hormone X during menstrual cycle.  
Rajah 11 menunjukkan aras berbeza bagi hormon X semasa kitar haid.

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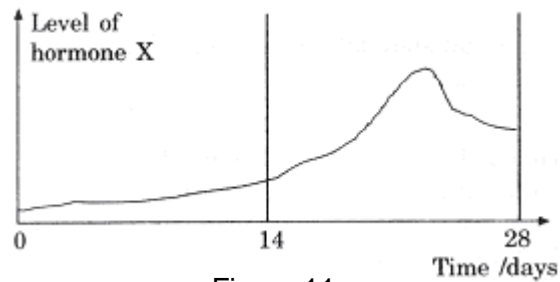


Figure 11

What is hormone X in Figure 11?

- A Oestrogen  
B Progesterone  
C Luteinizing hormone(LH)  
D Follicle stimulating hormone(FSH)
- 27 Zaleha was advised by a doctor to use a method of birth control in diagram 12. What is the consequence of using this type of birth control?  
Zaleha telah dinasihatkan oleh doktor untuk menggunakan kaedah mencegah kehamilan dibawah. Apakah akibat menggunakan pencegah kehamilan jenis ini?

A  
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Diagram 12

- A. Ovum cannot be produced/ovum tidak dapat dihasilkan  
B. The female sex hormones cannot be secreted/hormon seks perempuan tidak dapat dirembeskan.  
C. Sperm cells are unable to reach the ovum/sel sperma tidak sampai ke ovum  
D. The zygote is unable to implant/zigot tidak dapat menempel
- 28 Diagram 13 shows the formation of the fraternal twins. Which of the following is **not true** related to the characteristics of the twins below?  
Rajah 13 menunjukkan pembentukan kembar tidak seiras. Yang manakah antara berikut ciri **tidak benar** kembar di bawah?

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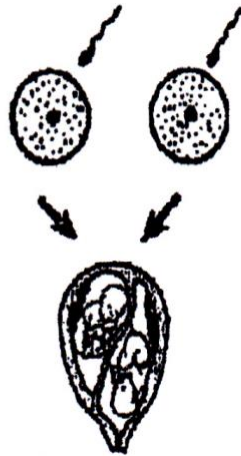


Diagram 13

- A. Have different sex.  
*Mempunyai jantina berbeza.*
- B. Have different placenta  
*Mempunyai plasenta berbeza*
- C. Have different characteristics  
*Mempunyai sifat berbeza*
- D. Have different genetic content  
*Mempunyai kandungan genetik berbeza*

29 Which of the following is the effect of cutting a man's vasa differentia?  
*Antara berikut, yang manakah adalah kesan memotong vas deferens seorang lelaki?*

A  
S

- A. Spermatogenesis does not occur  
*Spermatogenesis tidak berlaku*
- B. The man would be unable to ejaculate  
*Lelaki itu tidak akan berupaya memancut*
- C. The sperm does not flow into the urethra  
*Sperma tidak mengalir ke dalam urethra*
- D. The hormone testosterone is not secreted into the bloodstream  
*Hormone testosteron tidak dirembeskan ke dalam aliran darah.*

30 Diagram 14 shows a cell that is involved in human reproduction,  
*Rajah 15 menunjukkan sel yang terlibat dalam pembiakan manusia.*

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Diagram 14

Which of the following is not an important characteristic of the cell in the reproduction process?

Antara berikut yang manakah bukan ciri penting sel itu dalam proses pembiakan?

- A The presence of a nucleus/*kehadiran nukleus*
- B The presence of cytoplasm/*kehadiran sitoplasma*
- C It has a tail/*ia mempunyai ekor*
- D Contains a lot of mitochondria/*mengandungi banyak mitokondria*