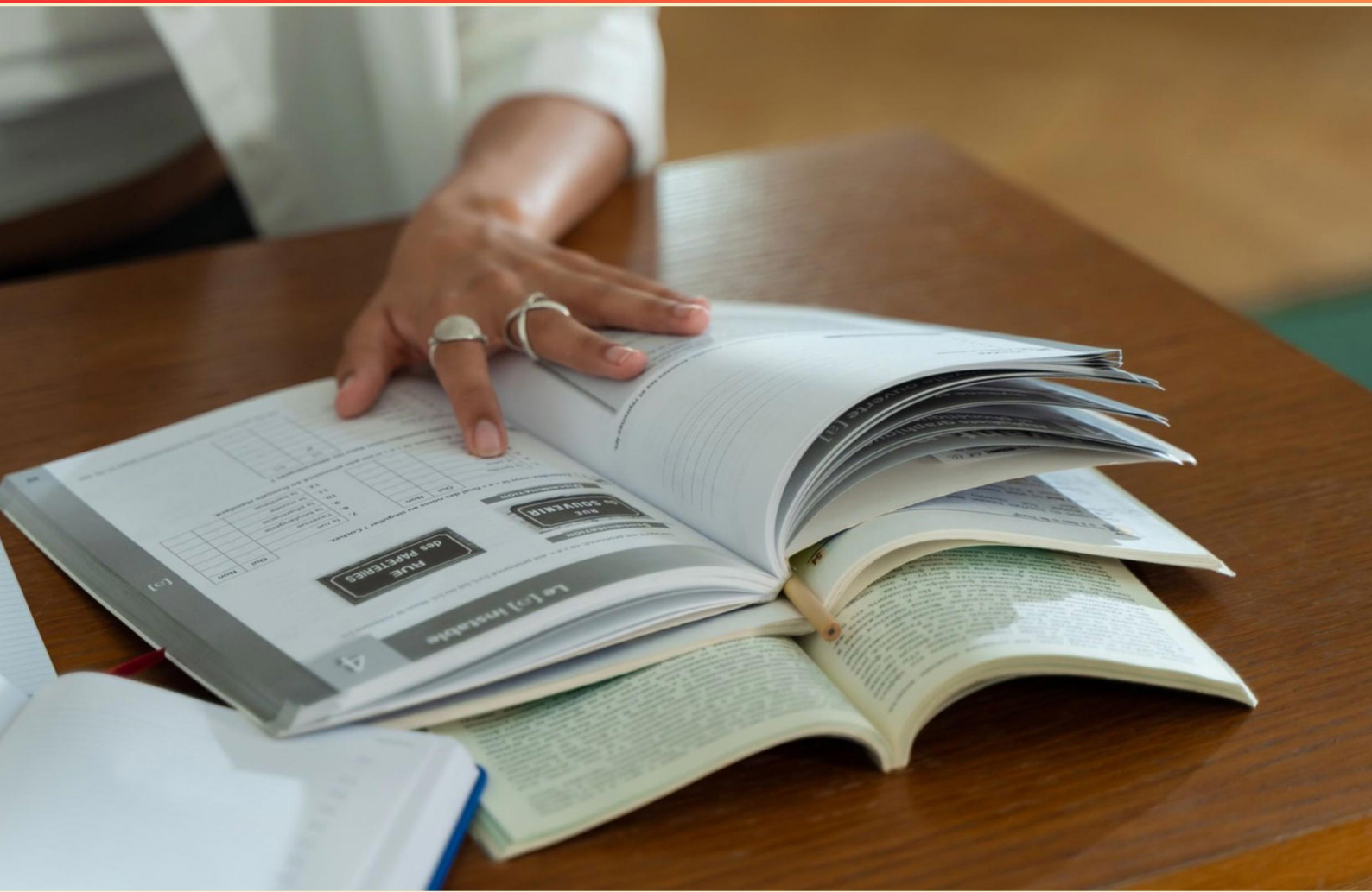


IGCSE BIOLOGY – HUMAN REPRODUCTION PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://igcsebiohumanreproduction.examzify.com>



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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. Which structure aids sperm motility by providing energy?**
 - A. Prostate gland
 - B. Seminal vesicle
 - C. Epididymis
 - D. Testis

- 2. What structure forms the connection between the mother and the developing fetus?**
 - A. Placenta
 - B. Oviduct
 - C. Cervix
 - D. Umbilical cord

- 3. Which of these is a method of barrier contraception?**
 - A. Birth control pill
 - B. Condom
 - C. Intrauterine device
 - D. Patch

- 4. Which hormone is primarily responsible for the development of secondary sexual characteristics in males?**
 - A. Estrogen
 - B. Testosterone
 - C. Progesterone
 - D. Luteinizing hormone

- 5. What is the genotype for males in humans?**
 - A. XX
 - B. XY
 - C. YY
 - D. XYY

- 6. What is the term for the breakdown and loss of the uterus lining from the vagina?**
- A. Implantation
 - B. Menstruation
 - C. Ovulation
 - D. Fertilization
- 7. What is the cell membrane's primary function in a sperm cell?**
- A. Protects genetic material
 - B. Stores energy
 - C. Facilitates movement
 - D. Regulates entry and exit of substances
- 8. What defines a diploid cell?**
- A. A cell with one complete set of chromosomes
 - B. A cell with two complete sets of chromosomes
 - C. A cell that is involved in meiosis
 - D. A cell that can divide by mitosis
- 9. What is the primary hormone produced in the ovaries?**
- A. Oestrogen
 - B. Testosterone
 - C. Progesterone
 - D. Both A and C
- 10. What is the function of the ovaries?**
- A. Production of testosterone
 - B. Secretion of progesterone
 - C. Production of eggs and secretion of hormones
 - D. Storage of sperm

Answers

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1. B
2. A
3. B
4. B
5. B
6. B
7. D
8. B
9. D
10. C

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Explanations

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1. Which structure aids sperm motility by providing energy?

- A. Prostate gland
- B. Seminal vesicle**
- C. Epididymis
- D. Testis

The seminal vesicle is crucial for providing energy to sperm motility. It produces a viscous fluid rich in fructose, which serves as an energy source for sperm. This energy is essential for sperm to swim through the female reproductive tract and reach the egg for fertilization. The fluid produced by the seminal vesicles also contains other substances that help enhance sperm motility and overall function. This support is vital for the sperm to navigate through the various environments they encounter post-ejaculation. In contrast, the prostate gland mainly contributes to the composition of semen with its own fluid, which helps to nourish sperm and contribute to neutralizing the acidity of the female vagina, but does not provide a primary energy source. The epididymis is mainly responsible for the maturation and storage of sperm, while the testis is where sperm is produced but does not directly provide energy for motility.

2. What structure forms the connection between the mother and the developing fetus?

- A. Placenta**
- B. Oviduct
- C. Cervix
- D. Umbilical cord

The placenta serves as a vital organ for the exchange of nutrients, gases, and waste products between the mother and the developing fetus during pregnancy. It forms a direct connection to the fetus and is attached to the uterus, allowing it to effectively furnish the fetus with essential substances like oxygen and glucose while simultaneously facilitating the removal of carbon dioxide and waste materials. In contrast to the placenta, other structures such as the oviduct are involved in the transport of the egg from the ovary to the uterus but do not participate in the exchange of materials once pregnancy has been established. The cervix acts as an opening to the uterus, playing a role during childbirth, but it is not responsible for the connection to the fetus. The umbilical cord is important as it connects the fetus to the placenta, transmitting nutrients and oxygen from the placenta to the fetus and carrying away waste, but it cannot be described as the structure forming the primary connection between the mother and the developing fetus. Thus, the placenta is correctly identified as the structure that provides the crucial link between these two organisms.

3. Which of these is a method of barrier contraception?

- A. Birth control pill
- B. Condom**
- C. Intrauterine device
- D. Patch

Barrier contraception works by physically blocking sperm from reaching an egg, thereby preventing fertilization. Condoms are a prominent example of this method; they are designed to cover the penis during sexual intercourse, creating a barrier that prevents sperm from entering the reproductive tract. This method is effective not only in preventing pregnancy but also in reducing the risk of sexually transmitted infections (STIs). The birth control pill, intrauterine device (IUD), and patch are methods of contraception that do not operate through a physical barrier. The birth control pill and patch release hormones to regulate the menstrual cycle and prevent ovulation, while the IUD is a device inserted into the uterus to prevent fertilization and may also inhibit implantation. None of these methods physically block sperm from entering the reproductive system, making the condom the only true barrier method among the options provided.

4. Which hormone is primarily responsible for the development of secondary sexual characteristics in males?

- A. Estrogen
- B. Testosterone**
- C. Progesterone
- D. Luteinizing hormone

Testosterone is the primary hormone responsible for the development of secondary sexual characteristics in males. This includes traits such as increased muscle mass, a deeper voice, and facial and body hair growth that typically emerge during puberty. Testosterone is produced mainly in the testes and stimulates the growth of the male reproductive system and the development of male-specific features. It plays a key role in regulating various physiological processes associated with male maturity and masculinity. The other hormones mentioned, while they have important roles in the body, are not primarily responsible for the male secondary sexual characteristics. Estrogen, for example, is more commonly associated with female secondary sexual characteristics, while progesterone plays a significant role in the menstrual cycle and pregnancy but does not influence male characteristics. Luteinizing hormone is involved in the endocrine system's regulation of sex hormones but is not directly responsible for the characteristics themselves. Thus, testosterone is the hormone that best fits the role described in the question.

5. What is the genotype for males in humans?

- A. XX
- B. XY**
- C. YY
- D. XYY

The genotype for males in humans is XY. This designation is based on the presence of two different sex chromosomes: one X chromosome and one Y chromosome. The X chromosome carries genes that are important for various physiological functions, while the Y chromosome carries genes crucial for male sex determination and the development of male reproductive structures. Males inherit an X chromosome from their mother and a Y chromosome from their father during fertilization, leading to the XY combination. This arrangement triggers the development of male characteristics, such as the formation of testes, which produce sperm and male hormones. The other options do not represent the typical male genotype. The XX combination is characteristic of females, while YY and XYY do not typically represent the standard genotypic make-up for males in the human species. Understanding the XY genotype helps in comprehending how sex-linked traits and genetic inheritance work in humans.

6. What is the term for the breakdown and loss of the uterus lining from the vagina?

- A. Implantation
- B. Menstruation**
- C. Ovulation
- D. Fertilization

The process described in the question refers specifically to menstruation, which is characterized by the shedding of the endometrial lining of the uterus when there is no implantation of a fertilized egg. During the menstrual cycle, if fertilization does not occur, hormonal changes trigger this breakdown, leading to the loss of blood, tissue, and mucus through the vagina. Menstruation typically occurs in cycles and is a key part of the reproductive system for individuals with a uterus, marking the end of one cycle and the beginning of another. Implantation involves the embedding of a fertilized egg into the uterine lining and does not involve the loss of tissue. Ovulation is the release of an egg from the ovary, while fertilization is the union of sperm and egg. Both of these events occur earlier in the reproductive cycle and are not related to the process of shedding the uterine lining. Hence, menstruation is the correct term for the breakdown and loss of the uterus lining through the vagina.

7. What is the cell membrane's primary function in a sperm cell?

- A. Protects genetic material
- B. Stores energy
- C. Facilitates movement
- D. Regulates entry and exit of substances**

The cell membrane's primary function in a sperm cell is to regulate the entry and exit of substances. This function is crucial for maintaining the internal environment of the sperm cell, allowing essential nutrients to enter while keeping harmful substances out. Additionally, the cell membrane is involved in communication with the external environment, which is vital for processes like signaling during fertilization. Maintaining proper ion concentrations and the balance of molecules is critical for the sperm's functionality, especially as it needs to be motile and capable of penetrating an egg during fertilization. By controlling what passes in and out, the cell membrane helps ensure that the sperm cell can fulfill its role effectively.

8. What defines a diploid cell?

- A. A cell with one complete set of chromosomes
- B. A cell with two complete sets of chromosomes**
- C. A cell that is involved in meiosis
- D. A cell that can divide by mitosis

A diploid cell is defined by having two complete sets of chromosomes, which is represented by the notation $2n$. In humans, for example, each somatic cell contains 23 pairs of chromosomes, totaling 46 chromosomes. These sets come from each parent, with one set inherited from the mother and the other from the father. This genetic arrangement allows diploid cells to participate in sexual reproduction and maintain genetic stability, as the two sets of chromosomes can provide diverse genetic combinations during reproduction. It is essential for a variety of cellular processes, including growth, development, and tissue repair, which rely on the full complement of genetic information provided by the diploid state. The other options do not accurately capture the definition of a diploid cell. A cell with one complete set of chromosomes refers to a haploid cell, those involved in meiosis do not inherently define as diploid or haploid since they include processes that lead to the formation of both types, and while many diploid cells can divide by mitosis, not all cells that undergo mitosis are necessarily diploid. Hence, the defining characteristic of a diploid cell remains its two complete sets of chromosomes.

9. What is the primary hormone produced in the ovaries?

- A. Oestrogen
- B. Testosterone
- C. Progesterone
- D. Both A and C**

The primary hormones produced in the ovaries are oestrogen and progesterone, making the answer encompassing both hormones correct. Oestrogen plays a crucial role in the development of female secondary sexual characteristics and the regulation of the menstrual cycle. It is involved in the maturation of eggs and the thickening of the uterine lining in preparation for a potential pregnancy. Progesterone, on the other hand, is critical for maintaining the uterine lining after ovulation and during early pregnancy. It helps prepare the endometrium for implantation of a fertilized egg and supports the early stages of pregnancy. Together, these hormones work synergistically to regulate various aspects of the reproductive system, especially in the menstrual cycle and pregnancy. Thus, the correct answer reflects the importance of both hormones in ovarian function.

10. What is the function of the ovaries?

- A. Production of testosterone
- B. Secretion of progesterone
- C. Production of eggs and secretion of hormones**
- D. Storage of sperm

The ovaries play a crucial role in the female reproductive system by serving two primary functions: the production of eggs (ova) and the secretion of hormones, including estrogen and progesterone. The development and release of eggs occur during the menstrual cycle, and this process is essential for reproduction. Additionally, the hormones secreted by the ovaries are vital for regulating various aspects of the menstrual cycle, maintaining pregnancy, and influencing secondary sexual characteristics. This understanding highlights how the ovaries are integral to both fertility and hormonal balance, supporting reproductive health throughout a woman's life. The production of testosterone is primarily associated with male reproductive systems, and storage of sperm takes place in the male reproductive organs, not the ovaries. Thus, the comprehensive functions of the ovaries align perfectly with the correct choice.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

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We wish you the very best on your exam journey. You've got this!

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