

Class 9 Science Chapter 11 – Important Questions

Reproduction: How Life Continues

 **New NCERT *Exploration* | 2026–27**

Chapter 11 covers **asexual and sexual reproduction, vegetative propagation, budding, spore formation, meiosis and variation, reproduction in flowering plants, pollination, fertilisation, reproduction in animals, human reproduction, menstrual cycle, pregnancy and reproductive health.**

SECTION A – VERY SHORT ANSWER QUESTIONS

1. What is reproduction?
2. Why is reproduction important for living organisms?
3. What are the two main types of reproduction?
4. What is asexual reproduction?
5. What is sexual reproduction?
6. How many parents are involved in asexual reproduction?
7. How many parents generally contribute to sexual reproduction?
8. What is an offspring?
9. What is a clone?
10. What is a gamete?

11. What is a chromosome?
 12. What is meiosis?
 13. What is fertilisation?
 14. What is a zygote?
 15. What is pollination?
 16. What is an embryo?
 17. What is implantation?
 18. What is puberty?
 19. What is menstruation?
 20. What are sexually transmitted infections (STIs)?
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SECTION B – ASEXUAL REPRODUCTION

21. Define asexual reproduction.
22. What are the main characteristics of asexual reproduction?
23. Why does asexual reproduction usually produce offspring genetically similar to the parent?
24. Name different methods of asexual reproduction.
25. What is vegetative propagation?
26. What is reproduction by cutting?
27. Give examples of plants propagated by cutting.

- 28. What is grafting?**
- 29. What is layering?**
- 30. What is tissue culture?**
- 31. What is budding?**
- 32. Explain budding in yeast.**
- 33. Explain budding in Hydra.**
- 34. What is spore formation?**
- 35. How does spore formation help an organism reproduce?**
- 36. Give an example of an organism reproducing through spores.**
- 37. What is binary fission?**
- 38. Give an example of an organism reproducing by binary fission.**
- 39. Differentiate between binary fission and budding.**
- 40. Why is asexual reproduction useful when rapid multiplication is required?**

The textbook explains that asexual reproduction involves a single parent and produces offspring that are almost exact copies, while sexual reproduction combines characteristics from two individuals.

SECTION C – VEGETATIVE PROPAGATION

- 41. What is vegetative propagation?**
- 42. Name four methods of vegetative propagation.**

- 43. Explain propagation by cutting with an example.**
- 44. Explain propagation by grafting.**
- 45. Explain propagation by layering.**
- 46. Explain tissue culture.**
- 47. What are the advantages of vegetative propagation?**
- 48. Why is vegetative propagation useful for producing large numbers of plants quickly?**
- 49. Why are plants produced by vegetative propagation genetically similar?**
- 50. Why can vegetatively propagated plants be more vulnerable to diseases?**
- 51. Why do farmers use vegetative propagation for some crops?**
- 52. Differentiate between natural and artificial vegetative propagation.**
- 53. A farmer wants to produce a large number of genetically identical plants quickly. Which method would you recommend and why?**

The chapter specifically asks why vegetatively propagated plants can be more vulnerable to diseases and how farmers use asexual methods in agriculture.



SECTION D – MITOSIS, MEIOSIS & VARIATION

- 54. What is mitosis?**
- 55. What is meiosis?**
- 56. Differentiate between mitosis and meiosis.**

57. Why is meiosis important in sexual reproduction?
58. What happens to chromosome number during meiosis?
59. What are haploid cells?
60. What are diploid cells?
61. What are gametes?
62. Why do gametes contain half the chromosome number?
63. How does meiosis contribute to variation?
64. Why are children genetically different from their parents?
65. Why are siblings usually not genetically identical?
66. How does sexual reproduction increase genetic variation?
67. What is the chromosome number in human body cells?
68. What is the chromosome number in human gametes?
69. Why must chromosome number be reduced during gamete formation?

Meiosis reduces the chromosome number from diploid to haploid, producing gametes; the chapter notes that human gametes contain **23 chromosomes**.



SECTION E – SEXUAL REPRODUCTION IN FLOWERING PLANTS

70. What is sexual reproduction in plants?
71. Name the reproductive organs of a flower.
72. What is the male reproductive part of a flower?

- 73. What is the female reproductive part of a flower?**
- 74. What is anther?**
- 75. What is filament?**
- 76. What is stigma?**
- 77. What is style?**
- 78. What is ovary?**
- 79. What is ovule?**
- 80. What is pollen?**
- 81. Where are pollen grains produced?**
- 82. Where are ovules present?**
- 83. What is pollination?**
- 84. What is self-pollination?**
- 85. What is cross-pollination?**
- 86. Differentiate between self-pollination and cross-pollination.**
- 87. Name different agents of pollination.**
- 88. How do insects help in pollination?**
- 89. How do wind-pollinated flowers differ from insect-pollinated flowers?**
- 90. Why are some flowers brightly coloured and strongly scented?**
- 91. Why are some flowers white or light-coloured when they bloom at night?**
- 92. What is fertilisation in flowering plants?**

93. What happens to the ovule after fertilisation?

94. What happens to the ovary after fertilisation?

95. How is a seed formed?

96. How is a fruit formed?



SECTION F – POLLINATION & FERTILISATION

97. Explain the process of pollination.

98. Explain self-pollination with an example.

99. Explain cross-pollination with an example.

100. Why is cross-pollination important for variation?

101. Explain the role of pollen grains in reproduction.

102. What happens when a pollen grain lands on a suitable stigma?

103. What is a pollen tube?

104. What is the function of the pollen tube?

105. Explain the process of fertilisation in a flower.

106. What is formed immediately after fertilisation?

107. Arrange these stages in the correct order:

Pollination → Pollen germination → Fertilisation → Zygote formation

108. Differentiate between pollination and fertilisation.

109. Why is fertilisation necessary for seed formation?

The textbook explicitly asks students to arrange **pollination, pollen germination, fertilisation and zygote formation** in the correct sequence.



SECTION G – REPRODUCTION IN ANIMALS

- 110. What is sexual reproduction in animals?**
 - 111. What are male and female gametes in animals?**
 - 112. What is external fertilisation?**
 - 113. What is internal fertilisation?**
 - 114. Give examples of animals showing external fertilisation.**
 - 115. Give examples of animals showing internal fertilisation.**
 - 116. Differentiate between external and internal fertilisation.**
 - 117. Why is external fertilisation generally associated with aquatic environments?**
 - 118. What are the advantages of internal fertilisation?**
 - 119. What happens after fertilisation in animals?**
 - 120. What is embryonic development?**
 - 121. What is the difference between an egg-laying animal and a live-bearing animal?**
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SECTION H – HUMAN REPRODUCTIVE SYSTEM

122. Name the main male reproductive organs.
 123. What is the function of the testes?
 124. Where are sperm produced?
 125. What is the function of sperm?
 126. Name the main female reproductive organs.
 127. What is the function of the ovaries?
 128. Where are eggs produced?
 129. What is the function of the uterus?
 130. What is the function of the oviduct/fallopian tube?
 131. What is the role of the vagina?
 132. Differentiate between sperm and egg.
 133. Draw and label the male reproductive system.
 134. Draw and label the female reproductive system.
 135. Explain the functions of the major parts of the male reproductive system.
 136. Explain the functions of the major parts of the female reproductive system.
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SECTION I – GAMETOGENESIS

- 137. What is gametogenesis?
 - 138. What is spermatogenesis?
 - 139. What is oogenesis?
 - 140. Where does spermatogenesis occur?
 - 141. Where does oogenesis occur?
 - 142. What is the role of meiosis in gamete formation?
 - 143. Why are sperm and eggs haploid?
 - 144. How does fertilisation restore the diploid chromosome number?
 - 145. What is ovulation?
 - 146. When does ovulation occur during the menstrual cycle?
 - 147. What happens to the egg after ovulation?
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SECTION J – MENSTRUAL CYCLE

- 148. What is the menstrual cycle?
- 149. What is menstruation?
- 150. Why does menstruation occur?
- 151. What is ovulation?
- 152. What happens to the uterine lining during the menstrual cycle?
- 153. What happens if fertilisation does not occur?
- 154. What happens if fertilisation occurs?

- 155. Why does menstruation stop during pregnancy?**
- 156. Why is the menstrual cycle important for reproduction?**
- 157. Explain the sequence of major events in the menstrual cycle.**
- 158. Why does the uterus prepare itself every month?**
- 159. What happens to the uterine lining when pregnancy does not occur?**

The chapter specifically asks why the menstrual cycle stops during pregnancy and connects fertilisation, implantation and pregnancy.



SECTION K – FERTILISATION & PREGNANCY

- 160. What is fertilisation in humans?**
- 161. Where does fertilisation usually occur in humans?**
- 162. What is a zygote?**
- 163. What happens to the zygote after fertilisation?**
- 164. What is implantation?**
- 165. Where does implantation occur?**
- 166. What is an embryo?**
- 167. How does the embryo receive nourishment?**
- 168. How long does human pregnancy usually last?**
- 169. What changes occur in the mother's body during pregnancy?**
- 170. What is the importance of proper nutrition during pregnancy?**

171. Why are regular medical check-ups important during pregnancy?

172. What is childbirth?

173. Explain the sequence:

Ovulation → Fertilisation → Zygote → Embryo → Implantation → Pregnancy



SECTION L – PUBERTY & REPRODUCTIVE MATURITY

174. What is puberty?

175. What is reproductive maturity?

176. Name the major changes that occur during puberty in boys.

177. Name the major changes that occur during puberty in girls.

178. Why do secondary sexual characteristics develop during puberty?

179. What role do hormones play during puberty?

180. Why is puberty important for reproduction?



SECTION M – REPRODUCTIVE HEALTH

181. What is reproductive health?

182. Why is reproductive health important?

183. What are sexually transmitted infections (STIs)?

184. Give examples of STIs.
185. How can STIs spread?
186. How can STIs be prevented?
187. Why is awareness about reproductive health important?
188. What is contraception?
189. Why are contraceptive methods used?
190. Name common methods of contraception.
191. How do condoms help prevent pregnancy and STIs?
192. What are oral contraceptive pills?
193. What is an IUD?
194. What is Copper-T?
195. Why is responsible reproductive behaviour important?

The textbook identifies **condoms, pills and IUDs (Copper-T)** among birth-control methods and emphasises maternal nutrition, check-ups and healthy practices during pregnancy.

SECTION N – APPLICATION-BASED QUESTIONS

196.  A farmer wants thousands of plants that are genetically identical to a high-quality parent plant.
- a) Which type of reproduction should be used?
 - b) Name two suitable methods.
 - c) Why are these methods effective?
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197. 🌸 A flower's anthers are removed before maturity and pollen from another plant of the same species is placed on its stigma.

- a) What type of pollination is being ensured?
 - b) Why are the anthers removed?
 - c) What will eventually form if fertilisation occurs?
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198. 🧬 A human body cell contains 46 chromosomes.

- a) How many chromosomes will its gametes contain?
 - b) Which type of cell division produces gametes?
 - c) Why is chromosome number reduced?
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199. 🧑 A sperm fuses with an egg.

- a) What process has occurred?
 - b) What is the resulting cell called?
 - c) What happens to this cell next?
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200. 🩸 A woman does not experience menstruation after fertilisation.

- a) Why does menstruation stop?
 - b) What has happened to the uterine lining?
 - c) What developmental process begins?
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SECTION O – COMPETENCY-BASED QUESTIONS

201. 🌱 Case Study – Vegetative Propagation

A farmer wants to rapidly multiply a plant with desirable characteristics.

- a) Which type of reproduction is suitable?
- b) Name two methods of vegetative propagation.

- c) Will the new plants be genetically similar to the parent?
 - d) Give one disadvantage of this method.
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202. Case Study – Flower Reproduction

A pollen grain lands on the stigma of a suitable flower.

- a) What process has occurred?
 - b) What happens to the pollen grain?
 - c) What structure develops from the pollen grain?
 - d) How does the male gamete reach the ovule?
 - e) What happens after fertilisation?
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203. Case Study – Meiosis

A human parent cell has 46 chromosomes.

- a) What is the chromosome number in the gametes produced by meiosis?
 - b) Why must this number be half?
 - c) What happens to the chromosome number after fertilisation?
 - d) How does meiosis contribute to variation?
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204. Case Study – Human Reproduction

A sperm fuses with an egg and forms a zygote.

- a) Where does fertilisation normally occur?
 - b) What does the zygote develop into?
 - c) What is implantation?
 - d) Where does implantation occur?
 - e) What is the approximate duration of human pregnancy?
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205. Case Study – Reproductive Health

A couple wants to prevent an unwanted pregnancy and reduce the risk of STIs.

- a) Name a suitable contraceptive method.
 - b) How does it work?
 - c) How can reproductive health be maintained responsibly?
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SECTION P – HIGHER-ORDER THINKING QUESTIONS

- 206. Why is reproduction essential for the continuity of life but not necessary for the survival of an individual organism?**
- 207. Why does asexual reproduction produce offspring that are genetically similar to the parent?**
- 208. Why can sexual reproduction produce greater variation?**
- 209. Why is variation important for the survival of species?**
- 210. Why is meiosis necessary before sexual reproduction?**
- 211. Why would sexual reproduction not work properly if gametes had the same chromosome number as body cells?**
- 212. Why are vegetatively propagated plants often more vulnerable to diseases?**
- 213. Why does cross-pollination generally increase genetic diversity?**
- 214. Why do some plants depend on insects for pollination?**
- 215. Why do flowers that bloom at night tend to be white or light-coloured?**
- 216. Why is fertilisation different from pollination?**
- 217. Why is implantation necessary for successful pregnancy?**
- 218. Why does menstruation stop during pregnancy?**

219. Why is reproductive health education important for adolescents?

220. Why are condoms important even when another contraceptive method is being used?

The textbook's own higher-order questions include the effects of only self-pollination on genetic diversity and the advantages of producing genetically identical plants through asexual methods.



SECTION Q – LONG ANSWER QUESTIONS

221. Define reproduction and explain its importance in the continuity of life.

222. Explain asexual reproduction and describe its different methods.

223. Explain vegetative propagation and its advantages and disadvantages.

224. Explain budding and spore formation with examples.

225. Differentiate between asexual and sexual reproduction.

226. Explain meiosis and its importance in sexual reproduction.

227. Explain how meiosis contributes to genetic variation.

228. Describe the structure and reproductive parts of a flower.

229. Explain pollination and differentiate between self-pollination and cross-pollination.

230. Explain fertilisation and seed formation in flowering plants.

231. Explain external and internal fertilisation in animals.

232. Describe the male reproductive system in humans.

233. Describe the female reproductive system in humans.

234. Explain gametogenesis in humans.

235. Explain the menstrual cycle.

236. Explain fertilisation, implantation and pregnancy in humans.

237. Explain the importance of reproductive health and contraception.

MOST IMPORTANT QUESTIONS FOR EXAM

If students have limited time, prepare these **first**:

- ★ **1. Define reproduction and explain its importance.**
- ★ **2. Differentiate between asexual and sexual reproduction.**
- ★ **3. Explain vegetative propagation with examples.**
- ★ **4. Explain budding and spore formation.**
- ★ **5. Explain mitosis and meiosis and differentiate between them.**
- ★ **6. Explain how meiosis produces variation.**
- ★ **7. Draw and label the parts of a flower.**
- ★ **8. Explain pollination and differentiate between self- and cross-pollination.**
- ★ **9. Explain fertilisation and seed formation in flowering plants.**
- ★ **10. Differentiate between external and internal fertilisation.**
- ★ **11. Draw and label the male reproductive system.**
- ★ **12. Draw and label the female reproductive system.**
- ★ **13. Explain the menstrual cycle.**
- ★ **14. Explain fertilisation, implantation and pregnancy.**
- ★ **15. Explain puberty and reproductive maturity.**

- ★ 16. Explain reproductive health and methods of contraception.
 - ★ 17. Explain how sexual reproduction creates variation.
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QUICK REVISION BOX

-  **Reproduction** → Production of new individuals
 -  **Asexual reproduction** → One parent; little genetic variation
 -  **Sexual reproduction** → Fusion of gametes; greater variation
 -  **Vegetative propagation** → New plants from vegetative parts
 -  **Budding** → New individual develops as a bud
 -  **Spore formation** → Reproduction through spores
 -  **Meiosis** → Produces haploid gametes
 -  **Pollination** → Transfer of pollen to stigma
 -  **Fertilisation** → Fusion of male and female gametes
 -  **Zygote** → First cell formed after fertilisation
 -  **Embryo** → Developing organism
 -  **Implantation** → Attachment of embryo to uterine wall
 -  **Menstruation** → Shedding of uterine lining when pregnancy does not occur
 -  **Pregnancy** → Development of embryo/fetus in uterus
 -  **Reproductive health** → Healthy and responsible reproductive life
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TOP DIAGRAMS TO PRACTISE

1.  Longitudinal section of a flower
2.  Vegetative propagation

3.  Budding in yeast
 4.  Spore formation
 5.  Meiosis / gamete formation
 6.  Male reproductive system
 7.  Female reproductive system
 8.  Pollination and fertilisation
 9.  Seed formation
 10.  Menstrual cycle
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★ Exam Tip

For process-based questions, learn the **sequence** rather than memorising isolated points:

Pollination → Pollen germination → Pollen tube → Fertilisation → Zygote → Embryo → Seed

For humans:

Ovulation → Fertilisation → Zygote → Embryo → Implantation → Pregnancy

And for gamete formation:

Diploid cell → Meiosis → Haploid gametes → Fertilisation → Diploid zygote

The chapter specifically connects meiosis with halving chromosome number and fertilisation with restoration of the reproductive chromosome number.