SECTION A

1. 1MARK  Loamy
2. 1MARK  40km/h.
3. 1MARK  weathering of rocks
4. 2MARKS  a; cockroach-tracheal tubes and spiracles  b; frog-lungs and skin  c; plants= stomata  d; earthworm-moist skin
5. 2MARKS Refer fig no11.3 on page123 of textbook
6. 2MARKS  
   WBC –They help us fight against diseases
   Platelets_ They help in clotting the blood
7. 2MARKS

<table>
<thead>
<tr>
<th>S.NO</th>
<th>ASEXUAL REPRODUCTION</th>
<th>SEXUAL REPRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>seeds not formed</td>
<td>seeds formed</td>
</tr>
<tr>
<td>2</td>
<td>vegetative parts are involved</td>
<td>reproductive parts are involved</td>
</tr>
</tbody>
</table>

8. 2MARKS Refer fig no12.5 on page 135
9. 2MARKS fig 14.8 on page163 of text book
10. 2MARKS Name the kind of mirror used
    1: head lights of car- concave mirror
    2: by Dentists-concave mirror

11. 3MARKS Complete this table with words MAXIMUM, LEAST, MEDIUM

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Characteristics</th>
<th>sandy soil</th>
<th>loamy soil</th>
<th>clayey soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particle size</td>
<td>maximum</td>
<td>medium</td>
<td>least</td>
</tr>
<tr>
<td>2</td>
<td>Absorption of water</td>
<td>least</td>
<td>medium</td>
<td>maximum</td>
</tr>
</tbody>
</table>

12. 3MARKS
   The time period of pendulum? 32/20=1.6 s
   b: Refer fig no13.4 on page 146
13. 3MARKS
1. reuse water used to wash vegetables in kitchen garden
2. water used for rinsing clothes can be used in toilets
3. use bucket of water instead of shower to bath
   or any other method

14. 3MARKS
Some of the forest products are wood, gum, sealing wax, medicines, paper, oils etc.

15. 3 MARKS:
1. bar screens
2. grit and sand
3. Decreased.
4. Sludge.
5. Clarified.
6. aerobic.

16. a) 3MARKS Write any three differences between aerobic and anaerobic respiration.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Aerobic respiration</th>
<th>Anaerobic respiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Occurs in presence of oxygen</td>
<td>Occurs in absence of oxygen</td>
</tr>
<tr>
<td>2</td>
<td>Complete breakdown of glucose into CO₂ and H₂O occurs</td>
<td>Glucose is partially broken down into alcohol and CO₂</td>
</tr>
<tr>
<td>3</td>
<td>More energy released</td>
<td>Less energy released</td>
</tr>
</tbody>
</table>

b) 2MARKS when oxygen availability is less anaerobic respiration occurs in muscle cells and lactic acid is produced which results in muscle cramps. We can get relief by a massage or by a hot water bath or

a) 2marks the number of times a person breathes in a minute is termed as breathing rate. It increases during a exercise

b) 2marks sleeping reading jumping, running

c) 1mark(anyone)

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Exhaled air</th>
<th>Inhaled air</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The air given out during breathing</td>
<td>The air taken in during breathing</td>
</tr>
<tr>
<td>2</td>
<td>It is rich in CO₂</td>
<td>It is rich in O₂</td>
</tr>
</tbody>
</table>

17. a) 2marks
The wire gets hot when electric current passes through it. This is called heating effect of electric current
b) 1 mark
electric heater, electric room heater, geyser or any other

c) 2 marks
A fuse is an electric device which prevents damage to electrical circuits and possible fires. They have a fuse wire which melts and breaks when excess current flows through the circuit thus breaking the circuit and help in saving electric appliances and possible fires

or

a) 2 marks
When electric current passes through a wire, it behaves like a magnet. This is called magnetic effect of electric current'

b) 1 mark Hans Christian Oersted discovered magnetic effect of electric current

c) 2 marks
Coils which behave as a magnet when current passes through them are called electro magnets. Two uses of electromagnets are in electric bells, lifting heavy loads, separating magnetic material from junk or any other use.

18. a) 1 mark
The change in direction of light when it falls on a mirror or other surfaces is called reflection of light

b) 2 marks What are four characteristics of image formed by plane mirror?
The image formed by a plane mirror is erect
It is of the same size as object
It shows lateral inversion
It is at a same distance from the mirror as the object
It is virtual (any four)

c) 2 marks
1. Real images can be obtained on a screen whereas virtual images cannot be obtained on a screen

or

a) 2 marks:
The two types of mirrors are concave mirror and convex mirror diagram on page 179 of text book

b) 1 mark convex lens

c) 2 marks draw what happens when sunlight falls on a prism diagram on page 186 it splits into seven colours VIBGYOR
SECTION B

MCQ (1M EACH)
19. b) plants,
20. b) The amount of air available to a person is less than available on ground
21. c) capillaries.
22. c) Bryophyllum
23. b) drumstick
24. a) km/h
25. c)
26. a) positive terminal
27. b) convex
28. c) heavy rainfall
29. a) 22\textsuperscript{nd} March
30. d) kerosene
31. b) II and III