doubtnut
India's Number 1 Education App

PHYSICS

BOOKS - NAVNEET PUBLICATION

OBSERVING SPACE: TELESCOPES

Examples

1. What is the difference between sky and space?

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2. What is space observation?

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3. Importance of space observation.

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Exercise

1. Choose the correct alternative and write it along with its allotted alphabet.

The wavelength of visible light is between.....to.....

A. $20m \rightarrow 40m$

B. $400nm \rightarrow 800nm$

C. $400\mu m \rightarrow 800\mu m$

D. $20km \rightarrow 40km$

Answer: B

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2. Choose the correct alternative and write it along with its allotted alphabet.

GMRT is used for.....waves.

A. electric

B. radio

C. magnetic

D. none of the above

A. electric

B. radio

C. magnetic

D. none of the above

Answer: B

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3. Choose the correct alternative and write it along with its alloted alphabet.

A certain X-ray telescope is named after scientist....

A. Subramanian chandrashekhar

B. Homi sarabhai

C. vikram sarabhai

D. Jayant Narlikar

A. Subramanian chandrashekhar

B. Homi sarabhai

C. vikram sarabhai

D. Jayant Narlikar

Answer: A

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4. Choose the correct alternative and write it along with its allotted alphabet.

The first scientist to use a telescope for space observation was.....

A. Newton

B. Arkimedi

C. Galileo

D. Lamarck

A. Newton

B. Arkimedi

C. Galileo

D. Lamarck

Answer: C

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5. Choose the correct alternative and write it along with its allotted alphabet.

The biggest optical telescope in India is situated at....

A. Pune

B. Nainital

C. Dehradun

D. Solapur

A. Pune

B. Nainital

C. Dehradun

D. Solapur

Answer: B

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6. Choose the correct alternative and write it along with its allotted alphabet.

GMRT has been erected at .....near pune.

A. Narayangaon

B. Vadgaon

C. Morgaon

D. Theur

A. Narayangaon

B. Vadgaon

C. Morgaon

D. Theur

Answer: A

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7. Choose the correct alternative and write it along with its allotted alphabet.

.....made the first lens in the world.

A. Galileo

B. Edison

C. Hans Lippershey

D. None of the above

A. Galileo

B. Edison

C. Hans Lippershey

D. None of the above

Answer: C

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8. Choose the correct alternative and write it along with its allotted alphabet.

.....is the tiniest part of electromagnetic radiation.

A. visible light

B. electric energy

C. solar energy

D. induction

A. visible light

B. electric energy

C. solar energy

D. induction

Answer: A

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9. Choose the correct alternative and write it along with its allotted alphabet.

.....is used in refracting optical telescope while.....is used in reflecting optical telescope.

A. Lens, concave mirror

B. concave mirror, lens

C. lens, convex mirror

D. convex mirror, lens

A. Lens, concave mirror

B. concave mirror, lens

C. lens, convex mirror

D. convex mirror, lens

Answer: A

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10. Match the columns:

*(1) Column I	Column II
(1) X-Ray	(a) GMRT
(2) Optical telescope	(b) ISRO
(3) Indian radio telescope	(c) Hubble
(4) Launching artificial satellite	(d) Chandra

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11. Match the columns:

(2) Column I	Column II
(1) Establishment of ISRO	(a) 2015
(2) Galileo's telescope	(b) 1969
(3) Launching of Hubble	(c) 1609
(4) Launching of Astrosat	(d) 1990

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12. Diagram based question:

Which type of telescopes can be made using a concave mirror, convex mirror, plane mirror and a lens? Draw diagrams of these telescopes.

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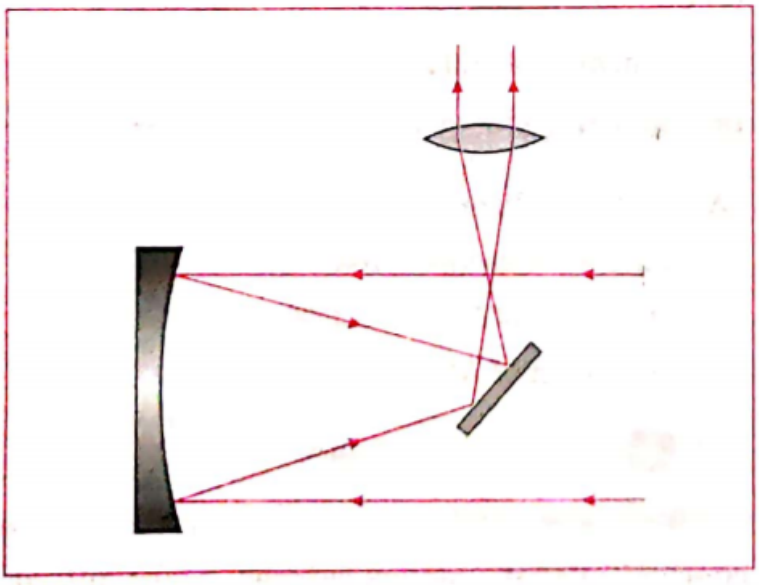
13. Study the figure and answer the following question:

What type of telescope is shown in the figure?



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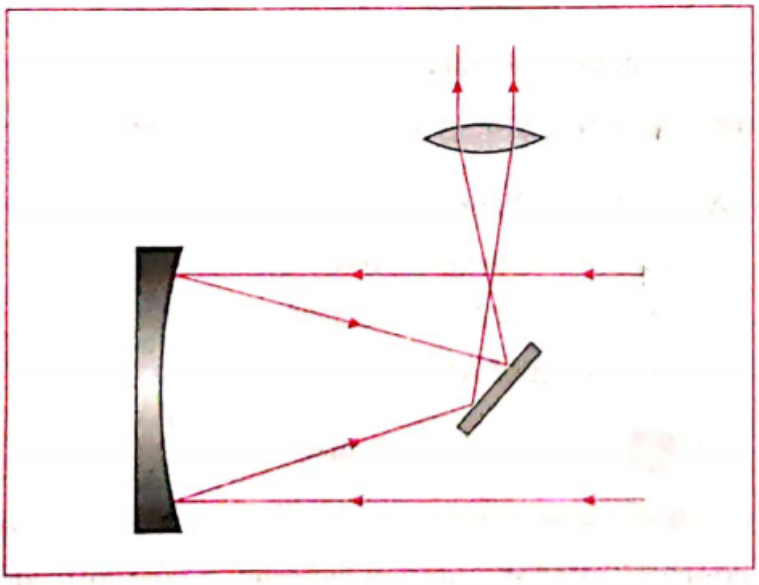
14. Study the figure and answer the following question:

Label the main parts of telescope.



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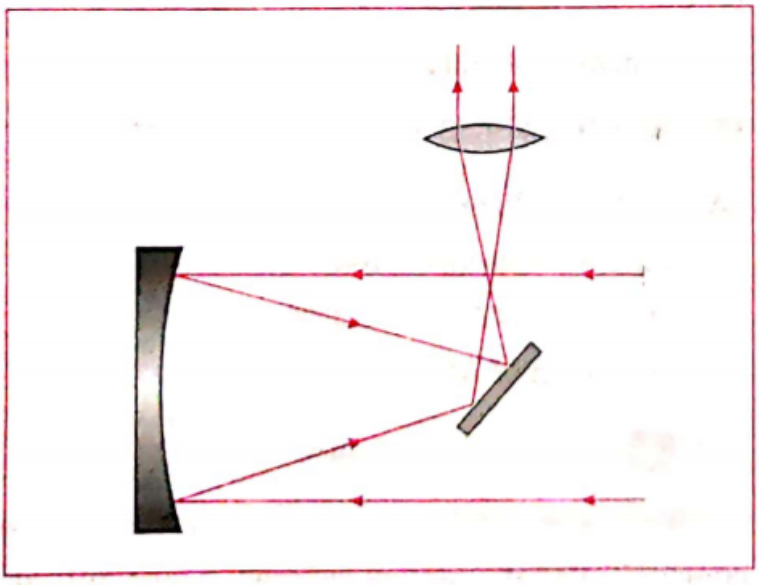
15. Study the figure and answer the following question:

Which type of mirror does the telescope use?



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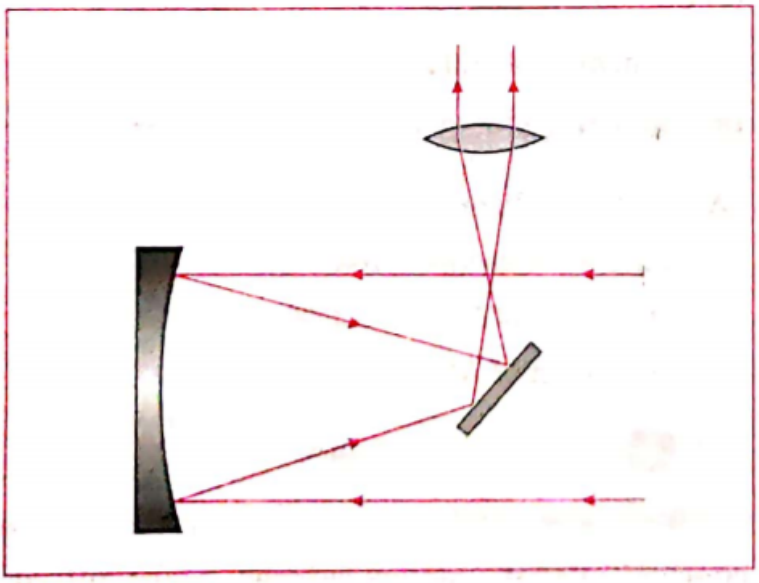
16. Study the figure and answer the following question:

What other type of telescope uses a curved mirror?



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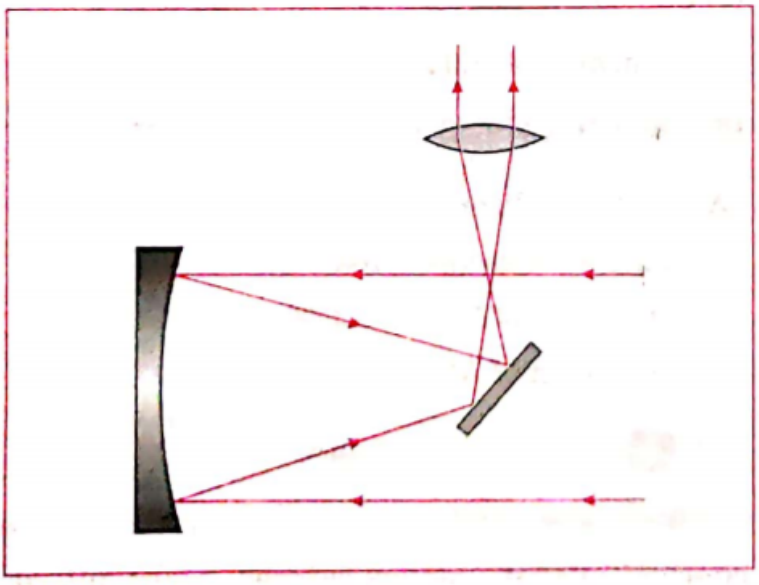
17. Study the figure and answer the following question:

Explain the working of the above telescope.



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18. Explain the construction of Galileo's telescope.

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19. Answer the following question:

Explain the construction of a radio telescope.

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20. Answer the following question:

Why are optical telescope located in uninhabited places on mountains?

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21. Answer the following question:

Why can an X-ray telescope not be based on the earth?

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22. Answer the following question:

Why do we need different types of telescopes for space

observation?

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23. Answer the following question:

What are the limitations of refracting telescope ? How these limitations were overcome?

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24. Answer the following question:

Explain the salient features of radio telescopes.

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25. Answer the following question:

Briefly explain the contribution of ISRO.

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26. Answer the following question:

What are the difficulties in using ground based optical telescope? How are they overcome?

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27. Complete the paragraph given below by using the appropriate word given below:

(optical telescope, X-rays, light, radio telescopes, electromagnetic waves, visible radiation)

The .....which our eyes can see in a tiny part of electromagnetic spectrum. Light has.....and it is called radiation. Radiation is seen in the form of visible light, infrared waves, micro-waves as well as in the form of .....and ultraviolet rays. However, we can see only..... ..... are used to capture visible radiation. But different types of telescopes are used to receive other types of radiation, and all such telescope are called.....

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