



DEEP PUBLIC SCHOOL  
SENIOR SECONDARY SCHOOL (Affiliated to CBSE)  
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**DEEP'S HOLIDAY'S ASSIGNMENTS (2021-22)**

## **Class-11 A**

### **English**

Q1. Read the passage carefully and answer the questions that follow:

Can you imagine a college without walls, professors or classrooms? Educator Bunker Roy can. More than 40 years ago, Roy, now 69, founded the Barefoot College in Tilonia, Rajasthan. His school admits rural women, often grandmothers and teaches them the basics of solar engineering and freshwater technology. His efforts have yielded enormous benefits. When the women return to their homes, they are trained enough to provide their communities, some of the world's most lonely places, with electricity and clean water. They also gain something important: a newfound self-confidence. The Barefoot model has already been used to empower women throughout Asia, Africa, and Latin America. Last year, former President, Bill Clinton presented Roy with a Clinton Global Citizen Award, which honours leaders who are solving the world's problems in effective ways.

2. If you go all over the world, to very remote villages, you will often find only very old people and very young people. The men have already left. So two ideas were put into practice in order to make the Barefoot Model work. First it was declared that men are untrainable, restless, always ready to move, ambitious, and they all want a certificate to show for their efforts. And the moment you give one of them a certificate, he leaves the village looking for a job in the city. That is how, the simple, practical solution of training grandmothers came up. They are sympathetic, tolerant, willing to learn, and patient. All the qualities you need are there. And the second idea was not to give out certificates. Because the moment a certificate is given, a woman, like a man, will see it as a passport for leaving rural areas and going to urban areas to find a job.

3. Barefoot College follows the lifestyle of Mahatma Gandhi: Students eat, sleep, and work on the floor. They can work for 20 years or they can go home the next day. As of today, 604 women solar engineers from 1083 villages in 63 countries have been trained. The engineers have given solar power to 45,000 houses. These were done by women who had never left their homes before. They hate the idea of leaving their families and getting on a plane. When they reach India, sometimes after 19 hours of travel, they are faced with strange food, strange people, and a strange language. All the training is done in sign language. Yet in six months, they



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will know more about solar engineering than most university graduates. Some women face problems at home for attending college. Most of the husbands do not like their wives going to these colleges and tell them not to come back if they do so. But, on her return when she is able to help provide her village with solar electricity, her husband wants her to get back home. The respect she now has is enormous and she considers herself no less than solar engineers. Bunker Roy dreams of providing the world's 47 least developed countries with Barefoot College trained grandmothers and solar electrify more than 1,00,000 houses.

On the basis of your understanding of the above passage answer the questions that follow with the help of the given options:

(a) Why did the promoter of Barefoot Model decide to train grandmothers?

- (i) Men do not want to be trained.
- (ii) Grandmothers were patient, willing to learn and tolerant.
- (iii) Men are lazy, want to make money.
- (iv) Men and women are not skilled.

(b) The attitude of the husbands to their wives on their return from training is different because

- (i) of the respect they gain from the villagers
- (ii) they were away for a long time
- (iii) they will again be looked after
- (iv) they will not go back

Answer the following questions briefly:

(c) How is Barefoot College different from other colleges?



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- (d) What did the women gain from the college apart from technology?
- (e) Why were certificates not given out after training?
- (f) What are the difficulties the women have to face during their travel and their life in Tilonia, Rajasthan?
- (g) How do the women consider themselves professionally, after their training?
- (h) What is the narrator's dream about solar electrification?

Find words from the passage which mean the same as the following: 1 x 2 = 2

- (i) many/great in size (para 1)
- (ii) far off (para 2)

Q2. As the Head Boy of your school, write a letter to the Principal requesting him for improvements in and updating of the school auditorium especially, the lights and sound systems which are old and outdated.

Q3. Rearrange the following words or phrases to make meaningful sentences.

- (a) to / her / all / friends / birthday / next week / party / she is inviting
- (b) architecture / I would / like to / books / on / look at / indian / the
- (c) than / no / mist / sooner / did / the / the / disappeared / sun / rise
- (d) the / on / forests / the / industry / oil / depends
- (e) give / to / armies / wars / forests / during / our / cover

## Assignment 2:

Read the passage carefully and answer the questions that follow:



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1. We sit in the last row, bumped about but free of stares. The bus rolls out of the dull crossroads of the city, and we are soon in open countryside, with fields of sunflowers as far as the eye can see, their heads all facing us. Where there is no water, the land reverts to desert. While still on level ground, we see in the distance the tall range of the Mount Bogda, abrupt like a shining prism laid horizontally on the desert surface. It is over 5,000 metres high, and the peaks are under permanent snow, in powerful contrast to the flat desert all around. Heaven Lake lies part of the way up this range, about 2,000 metres above sea level, at the foot of one of the higher snow-peaks.

2. As the bus climbs, the sky, brilliant before, grows overcast. I have brought nothing warm to wear: it is all down at the hotel in Urumqi. Rain begins to fall. The man behind me is eating overpoweringly smelly goat's cheese. The bus window leaks inhospitably but reveals a beautiful view. We have passed quickly from desert through arable land to pasture, and the ground is now green with grass, the slopes dark with pine. A few cattle drink at a clear stream flowing past moss-covered stones; it is a Constable landscape. The stream changes into a white torrent, and as we climb higher I wish more and more that I had brought with me something warmer than the pair of shorts that have served me so well in the desert. The stream (which, we are told, rises in Heaven Lake) disappears, and we continue our slow ascent. About noon, we arrive at Heaven Lake and look for a place to stay at the foot, which is the resort area. We get a room in a small cottage, and I am happy to note that there are thick quilts on the beds.

3. Standing outside the cottage we survey our surroundings. Heaven Lake is long, sardine shaped and fed by snowmelt from a stream at its head. The lake is an intense blue, surrounded on all sides by green mountain walls, dotted with distant sheep. At the head of the lake, beyond the delta of the inflowing stream, is a massive snowcapped peak which dominates the vista; it is part of a series of peaks that culminate, a little out of view, in Mount Bogda itself.

4. For those who live in the resort, there is a small mess hall by the shore. We eat here sometimes, and sometimes buy food from the vendors outside, who sell kabab and naan until the last buses leave. The kababs, cooked on skewers over charcoal braziers, are particularly good; highly spiced and well done. Horse's milk is available too from the local Kazakh herdsmen, but I decline this. I am so affected by the cold that Mr. Cao, the relaxed young man who runs the mess, lends me a spare pair of trousers, several sizes too large but more than comfortable. Once I am warm again, I feel a predinner spurt of energy dinner will be long in coming and I ask him whether the lake is good for swimming in.

5. "Swimming ?" Mr. Cao says. "You aren't thinking of swimming, are you?"



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6. "I thought I might," I confess. "What's the water like?"

7. He doesn't answer me immediately, turning instead to examine some receipts with exaggerated interest. Mr. Cao, with great offhandedness, addresses the air. "People are often drowned here," he says. After a pause, he continues. "When was the last one?" This question is directed at the cook, who is preparing a tray of mantou (squat white steamed bread rolls), and who now appears, wiping his doughy hand across his forehead. "Was it the Beijing athlete?" asks Mr. Cao.

On the basis of your understanding of the above passage, complete the statements given below with the help of the options that follow:

(a) One benefit of sitting in the last row of the bus was that:

- (i) the narrator enjoyed the bumps.
- (ii) no one stared at him
- (iii) he could see the sunflowers.
- (iv) he avoided the dullness of the city.

(b) The narrator was travelling to:

- (i) Mount Bogda
- (ii) Heaven Lake
- (iii) a 2,000 m high snow peak
- (iv) Urumqi

(c) On reaching the destination the narrator felt relieved because:

- (i) he had got away from the desert
- (ii) a difficult journey had come to an end
- (iii) he could watch the snow peak
- (iv) there were thick quilts on the beds

(d) Mount Bogda is compared to:

- (i) a horizontal desert surface
- (ii) a shining prism



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- (iii) a Constable landscape
- (iv) the overcast sky

Answer the following questions briefly:

- (e) Which two things in the bus made the narrator feel uncomfortable?
  - (f) What made the scene look like a Constable landscape?
  - (g) What did he regret as the bus climbed higher?
  - (h) Why did the narrator like to buy food from outside?
  - (i) What is ironic about the pair of trousers lent by Mr. Cao?
  - (j) Why did Mr. Cao not like the narrator to swim in the lake?
- (k) Find words from the passage which mean the same as each of the following:
- (i) sellers (para 4)
  - (ii) increased (para 7)  $1 \times 2 = 2$

Q2. As the Head Boy of your school, write a letter to the Principal requesting him for updating the library with encyclopaedia and other knowledge-related books.

Q3. Re-arrange the jumbled words to form meaningful sentences.

- (a) began to / the station / cards / the train / when / play / whistled off / we / from
- (b) of smoke / outside / a ring / there / curling / the kitchen / out of / was / the chimney
- (c) they / in the hall / for / two hours / watching / had been / television
- (d) blessings / you / all / on / may / showered / be
- (e) the / had / crying / been / child / the / hours / two / last / for

## **Chemistry**

### **Assignment-1**

**(Thermodynamics and states of matter)**



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- 1) Define Boyle's law and draw a graph between Pressure and volume.
- 2) Name and state the law governing expansion of gases with temp. at constant pressure.
- 3) Derive the combined gas law from various gas laws.
- 4) Derive the equation of state .
- 5) Write the expression for vander waals equation and give the significance of vander waals constants.
- 6) Under what conditions the heat evolved or absorbed is equal to the internal energy change?
- 7) What is the sign of  $\Delta H$  for endothermic reactions and why?
- 8) Under what conditions,  $\Delta H$  of a process is equal to  $\Delta U$ ?
- 9) Define enthalpy of fusion and enthalpy of atomization.
- 10) State first law of thermodynamics and state its limitations.

## Assignment-2

### (Hydrocarbons)

- 1) Give different isomers of  $C_4H_{10}$  with their I.U.P.A.C. names.
- 2) Give the I.U.P.A.C. name of the lowest molecular weight alkane that contains a quaternary carbon.
- 3) Which of the following has the highest boiling point?  
(i) 2-methylpentane  
(ii) 2, 3 – dimethylbutane  
(iii) 2, 2-dimethylbutane.
- 4) Give the structure of the alkene ( $C_4H_8$ ) which adds on HBr in the presence and in the absence of peroxide to give the same product  $C_4H_9Br$ .
- 5) Draw the structures of the following:  
(i) Dicyclopropyl methane      (ii) 2-methyl-3—isopropyl heptane.

### Mathematics



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## Assignment-1

### CH. TRIGONOMETRIC FUNCTIONS

1. Find the general solution for each of the following equations:

a.  $\cos 4x = \cos 2x$                       b.  $\cos 3x + \cos x - \cos 2x = 0$

2. PROVE THAT:  $\sin x + \sin 3x + \sin 5x + \sin 7x = 4 \cos x \cos 2x \sin 4x$

3. Find  $\sin x/2$ ,  $\cos x/2$  and  $\tan x/2$  if  $\tan x = -4/3$ ,  $x$  is in quadrant II.

4. prove that :  $\sin (n+1)x \sin (n+2)x + \cos (n+1)x \cos (n+2)x = \cos x$

5. Find the value of:

(i)  $\sin 75^\circ$

(ii)  $\tan 15^\circ$

6. Find the values of :

a.  $\sin 765^\circ$                       b.  $\operatorname{cosec} (-1410^\circ)$

7. Find the values of any other 2 trigonometric functions if  $\cos x = -1/2$ ,  $x$  lies in third quadrant.

8. Find the radian measures corresponding to the following degree measures:

(i)  $25^\circ$  (ii)  $-47^\circ 30'$





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9. Find the degree measures corresponding to the following radian measures (Use  $\pi = 22/7$ )

(i)  $11/16$

(ii)  $-4$

10. A wheel makes 360 revolutions in one minute. Through how many radians does it turn in one second?

## Assignment-2

### CH. LINEAR INEQUALITIES

1. Solve  $5x - 3 < 7$ , when

(i)  $x$  is an integer

(ii)  $x$  is a real number

2. The longest side of a triangle is 3 times the shortest side and the third side is 2 cm shorter than the longest side. If the perimeter of the triangle is at least 61 cm, find the minimum length of the shortest side.

3. To receive Grade 'A' in a course, one must obtain an average of 90 marks or more in five examinations (each of 100 marks). If Sunita's marks in first four examinations are 87, 92, 94 and 95, find minimum marks that Sunita must obtain in fifth examination to get grade 'A' in the course.

4. solve graphically:  $2x + y \geq 8$ ,  $x + 2y \geq 10$

5. Solve the inequalities:  $2 \leq 3x - 4 \leq 5$

6. IQ of a person is given by the formula

$$IQ = \frac{MA}{CA} \times 100,$$
  
, Where MA is mental age and CA is chronological age. If  $80 \leq IQ \leq 140$  for a group of 12 years old children, find the range of their mental age.



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7. draw the graph of :  $4x + 3y \leq 60, y \geq 2x, x \geq 3, x, y \geq 0$

8. Solve  $24x < 100$ , when

(i)  $x$  is a natural number.

(ii)  $x$  is an integer.

9. Find all pairs of consecutive odd positive integers both of which are smaller than 10 such that their sum is more than 11.

10. The longest side of a triangle is 3 times the shortest side and the third side is 2 cm shorter than the longest side. If the perimeter of the triangle is at least 61 cm, find the minimum length of the shortest side.

### Physical education

Holiday homework :

1. Draw a 400mts track with all specifications
2. One game of choice ( consult ur cbse book)
3. BMI test full details with 10 members and bar diagram
4. Yoga (5 Asans with diagram and 3pranyam)
5. Write with pic National awards

### Computer Science

#### **Assignment-1**

Topic-List:



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1. Write a python script to create a list of first n natural numbers.
2. Write a python script to create a list of first n odd natural numbers.
3. Write a python script to create a list of first n even natural numbers.
4. Write a python script to create a list of squares of first n natural numbers.
5. Write a python script to find greatest number in a given list of numbers.
6. Write a python script to find smallest number in a given list of numbers.
7. Write a python script to calculate sum of elements in a given list of numbers.
8. Write a python script to remove all none int values from a list.
9. Write a python script to print distinct elements along with their frequency of occurrence in the list.
10. Write a python script to print indices of all occurrence of a given element in a given list.

## **Assignment-2**

### Topic-Tuple:

1. Write a python script to count elements in the tuple.
2. Write a python script to print tuple elements reverse order.
3. Write a python script to find largest elements in the tuple.
4. Write a python script to find smallest element in the tuple.
5. Write a python script to find second largest element in the tuple.
6. Write a python script to sort tuple elements.
7. Write a python script to merge to sorted tuples.
8. Write a python script to calculate some of the elements of the tuple.
9. Write a python script to compare two tuples, whether they contain same elements in the same order or not.

## **PHYSICS**

### **ASSIGNMENT-1**

9.1 A steel wire of length 4.7 m and cross-sectional area  $3.0 \times 10^{-5} \text{ m}^2$  stretches by the same amount as a copper wire of length 3.5 m and cross-sectional area of  $4.0 \times 10^{-5} \text{ m}^2$  under a given load. What is the ratio of the Young's modulus of steel to that of copper?



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9.2 Figure 9.11 shows the strain-stress curve for a given material. What are (a) Young's modulus and (b) approximate yield strength for this material

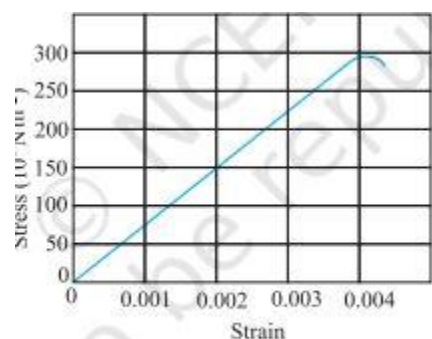


Fig. 9.11

9.3 The stress-strain graphs for materials A and B are shown in Fig. 9.12.

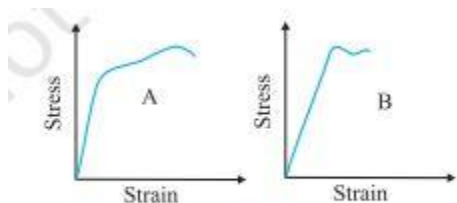


Fig. 9.12

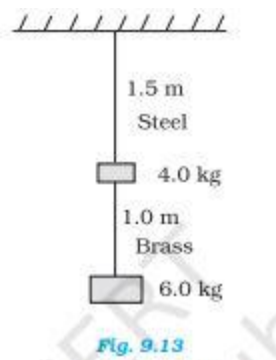
The graphs are drawn to the same scale. (a) Which of the materials has the greater Young's modulus? (b) Which of the two is the stronger material?

9.4 Read the following two statements below carefully and state, with reasons, if it is true or false. (a) The Young's modulus of rubber is greater than that of steel; (b) The stretching of a coil is determined by its shear modulus.

9.5 Two wires of diameter 0.25 cm, one made of steel and the other made of brass are loaded as shown in Fig. 9.13. The unloaded length of steel wire is 1.5 m and that of brass wire is 1.0 m. Compute the elongations of the steel and the brass wires.



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9.6 The edge of an aluminium cube is 10 cm long. One face of the cube is firmly fixed to a vertical wall. A mass of 100 kg is then attached to the opposite face of the cube. The shear modulus of aluminium is 25 GPa. What is the vertical deflection of this face?

9.7 Four identical hollow cylindrical columns of mild steel support a big structure of mass 50,000 kg. The inner and outer radii of each column are 30 and 60 cm respectively. Assuming the load distribution to be uniform, calculate the compressional strain of each column.

9.8 A piece of copper having a rectangular cross-section of  $15.2 \text{ mm} \times 19.1 \text{ mm}$  is pulled in tension with 44,500 N force, producing only elastic deformation. Calculate the resulting strain?

## ASSIGNMENT -2

9.9 A steel cable with a radius of 1.5 cm supports a chairlift at a ski area. If the maximum stress is not to exceed  $108 \text{ N m}^{-2}$ , what is the maximum load the cable can support ?

9.10 A rigid bar of mass 15 kg is supported symmetrically by three wires each 2.0 m long. Those at each end are of copper and the middle one is of iron. Determine the ratios of their diameters if each is to have the same tension.

9.11 A 14.5 kg mass, fastened to the end of a steel wire of unstretched length 1.0 m, is whirled in a vertical circle with an angular velocity of 2 rev/s at the bottom of the circle. The cross-sectional area of the wire is  $0.065 \text{ cm}^2$ . Calculate the elongation of the wire when the mass is at the lowest point of its path.



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9.12 Compute the bulk modulus of water from the following data: Initial volume = 100.0 litre, Pressure increase = 100.0 atm ( $1 \text{ atm} = 1.013 \times 10^5 \text{ Pa}$ ), Final volume = 100.5 litre. Compare the bulk modulus of water with that of air (at constant temperature). Explain in simple terms why the ratio is so large.

9.13 What is the density of water at a depth where pressure is 80.0 atm, given that its density at the surface is  $1.03 \times 10^3 \text{ kg m}^{-3}$ ?

9.14 Compute the fractional change in volume of a glass slab, when subjected to a hydraulic pressure of 10 atm.

9.15 Determine the volume contraction of a solid copper cube, 10 cm on an edge, when subjected to a hydraulic pressure of  $7.0 \times 10^6 \text{ Pa}$ . 9.16 How much should the pressure on a litre of water be changed to compress it by 0.10%?



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9.9 A steel cable with a radius of 1.5 cm supports a chairlift at a ski area. If the maximum stress is not to exceed  $108 \text{ N m}^{-2}$ , what is the maximum load the cable can support ?

9.10 A rigid bar of mass 15 kg is supported symmetrically by three wires each 2.0 m long. Those at each end are of copper and the middle one is of iron. Determine the ratios of their diameters if each is to have the same tension.

9.11 A 14.5 kg mass, fastened to the end of a steel wire of unstretched length 1.0 m, is whirled in a vertical circle with an angular velocity of 2 rev/s at the bottom of the circle. The cross-sectional area of the wire is  $0.065 \text{ cm}^2$ . Calculate the elongation of the wire when the mass is at the lowest point of its path.

9.12 Compute the bulk modulus of water from the following data: Initial volume = 100.0 litre, Pressure increase = 100.0 atm ( $1 \text{ atm} = 1.013 \times 10^5 \text{ Pa}$ ), Final volume = 100.5 litre. Compare the bulk modulus of water with that of air (at constant temperature). Explain in simple terms why the ratio is so large.

9.13 What is the density of water at a depth where pressure is 80.0 atm, given that its density at the surface is  $1.03 \times 10^3 \text{ kg m}^{-3}$ ?

9.14 Compute the fractional change in volume of a glass slab, when subjected to a hydraulic pressure of 10 atm.

9.15 Determine the volume contraction of a solid copper cube, 10 cm on an edge, when subjected to a hydraulic pressure of  $7.0 \times 10^6 \text{ Pa}$ . 9.16 How much should the pressure on a litre of water be changed to compress it by 0.10%?



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**DEEP'S HOLIDAY'S ASSIGNMENTS (2021-22)**