



*Admission Tech*

**Ahsanullah (AUST)**  
**Admission Question**

**Spring**

**Year : 2018**



**Section 1: Physics**

1. When was theory of relativity discovered?  
A. 1905      B. 1921      C. 1805      D. 1911
2. In how many ways can vectors be multiplied?  
A. 2      B. 3      C. 4      D. 6
3. In which year Galileo discover the laws of falling bodies?  
A. 1689      B. 1789      C. 1589      D. 1889
4. If a force of 40N works on a body of mass 5 kg then what is the acceleration ( $\text{ms}^{-2}$ )?  
A. 8      B. 6      C. 4      D. 2
5. What is the dimension of work  
A.  $\text{ML}^2$       B.  $\text{ML}^{-2}$       C.  $\text{MLT}^{-2}$       D.  $\text{ML}^2\text{T}^{-2}$
6. If two balls of 10 kg are kept away from each other what is the gravitational force (N) between them?  
A.  $6.67 \times 10^{-7}$       B.  $6.67 \times 10^{-10}$       C.  $6.67 \times 10^{-6}$       D.  $6.67 \times 10^{-5}$
7. Intermolecular attraction and repulsion is equal when-  
A.  $r > r_0$       B.  $r < r_0$       C.  $r = 0$       D.  $r = r_0$
8. What is the melting point of NaCl?  
A. 1071K      B. 1072K      C. 1073K      D. 1074K
9. What kind of wave is sound generated in air?  
A. Mechanical wave      B. Radio wave      C. Electronic wave      D. Water wave
10. Gases that follow the ideal gas laws are?  
A. Real gases      B. Inert gases      C. Natural gases      D. Ideal gases
11. Which one is God's Particle?  
A. Gluon      B. Lepton      C. Higgs-Boson      D. Photon
12. The intermolecular force between gas particles depend on-  
A. Pressure      B. Temperature      C. Volume      D. Entropy
13. What is the resistance of a 200V-60W bulb?  
A. 806 ohm      B. 1320 ohm      C. 3.6 ohm      D. 202 ohm
14. Magnetic length is how many times of geometric length?  
A. 1      B. 0.5      C. 0.65      D. 0.85
15. What is the S.I. unit of Magnetic Flux?  
A. Tesla-meter<sup>2</sup>      B. Tesla-meter      C. Tesla/meter<sup>2</sup>      D. Tesla/meter
16. Which one is the mathematical form of the second law of reflection?  
A.  $i > r$       B.  $i = r$       C.  $i < r$       D.  $i/r$
17. Who gave the theory of relativity?  
A. Max Plank      B. Albert Einstein      C. Galileo      D. Newton
18. Which of the following emits gamma rays?  
A. C - 12      B. N - 14      C. Cobalt - 60      D. Fe - 65





19. In which year did Neil's Bohr propose his atomic model?  
A. 1922                      B. 1911                      C. 1919                      D. 1913
20. A hole in a semiconductor is \_\_\_\_\_ charged.  
A. Positively                B. Negatively                C. Neutrally                D. None

**Section 2: Chemistry**

1. Which gas reacts with hemoglobin in blood?  
A.  $\text{NH}_3$                       B.  $\text{Cl}_2$                       C.  $\text{SO}_2$                       D. CO
2. Which of the following is relatively safe?  
A. Ag                          B. Cu                          C. Pb                          D. As
3. What is the charge of an electron?  
A.  $-1.6 \times 10^{-19} \text{ C}$     B.  $1.6 \times 10^{-19} \text{ C}$             C. + 1                          D. - 1
4. Which one is a composite particle?  
A. Meson                      B. Deuteron                      C. Neutrino                      D. Pion
5. What is the meaning of the Greek word?  
A. sea water                B. sea salt                      C. to produce                D. salt
6. How many elements in d-block?  
A. 30                          B. 34                          C. 40                          D. 29
7. What is the unit of rate of reaction?  
A.  $\text{mol dm}^3 \text{ s}^{-1}$             B.  $\text{mol L}^{-1} \text{ s}$                       C.  $\text{mol}^{-1} \text{ L s}$                       D.  $\text{mol dm}^{-3} \text{ s}^{-1}$
8. Which enzyme in yeast affects ethanol production from glucose?  
A. Invertase                B. Uriaze                      C. Amylaz                      D. Xaimaze
9. Which one is responsible for diarrhea?  
A. Bromate                B. Clomate                      C. Benzote                      D. Sulphate
10. Sulphate is responsible for which disease?  
A. Asthma                      B. Pain                          C. Heart disease                D. Stroke
11. Which atom is present in Feuran?  
A. S                              B. N                              C. Cl                              D. O
12. A mixture of d and l is called-  
A. Isomer                      B. Enanisomer                      C. Recimic-mixture                D. Mesomer
13. What is the limit of temperature in atmosphere?  
A. -92 C to 1200 C            B. -92 C to 1250 C            C. -90 C to 1200 C            D. 92 C to 1250 C
14. What is the pressure (mm Hg) of water vapor at 20 degree C?  
A. 8.45                      B. 11.45                      C. 14.54                      D. 17.54
15. 1 mole of  $\text{HNO}_3$  is -  
A. 98g                          B. 63g                          C. 64g                          D. 100g

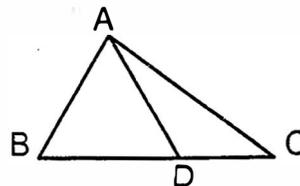




16. 1 mil mol  $\text{H}_2\text{SO}_4$  = ?  
A. 98 gm                      B. 9.8 gm                      C. 0.98 gm                      D. 0.098 gm
17. Which one is a non-conductor?  
A. Copper                      B. Gold                      C. Graphite                      D. Petrol
18. What is one mole current?  
A. 1 Coulomb current                      B. 1 Farad current  
C. 0.1 Coulomb current                      D. 0.1 Farad current
19. What will be the color of glass if there is FeO in silica glass?  
A. Red                      B. Green                      C. White                      D. Yellow
20. What is the main ingredient of coal?  
A.  $\text{SO}_2$                       B.  $\text{SiO}_2$                       C. C                      D.  $\text{CS}_2$

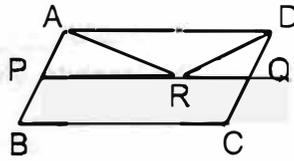
**Section 3: Mathematics**

1. A seller of pen was asking for such price that would enable him to offer 10% discount and still make a profit of 20% on cost. If the cost of a pen was Tk. 30, what was his asking price?  
(a) Tk. 32                      (b) Tk. 36                      (c) Tk. 40                      (d) Tk. 42
2. If one-half of female students enjoy watching movies and one-third of male students do not like to watch movies, what fractional part of the student body enjoys watching movies?  
(a)  $5/12$                       (b)  $2/5$                       (c)  $3/4$                       (d)  $1/6$
3. In a picnic there were 240 persons. There were 20 more men than women and there were 20 more adults than children. How many men were there in the picnic?  
(a) 240                      (b) 75                      (c) 110                      (d) 130
4. In ABC,  $AB = 4$  cm,  $AC = 6$  cm and  $BD = 3$  cm. If  $\angle BAD = \angle DAC$ , what is the length?  
(a) 7                      (b) 7.5                      (c) 9                      (d) 9.5





8. In the parallelogram,  $PQ \parallel BC$  and P is the midpoint of A B. If  $PR = 16$  cm and area of ABCD is 128 sq. cm, what is the area of the  $\triangle ARD$  in sq. cm?  
 (a) 16 (b) 20  
 (c) 24 (d) 28



9. In a store, the ratio of red socks to green socks is 3:2. The socks are made of either cotton or wool. If 60% of the red socks are made of cotton and 80% of the green socks are made of wool, what percentages of socks are made of cotton?  
 (a) 44 (b) 48 (c) 50 (d) 52

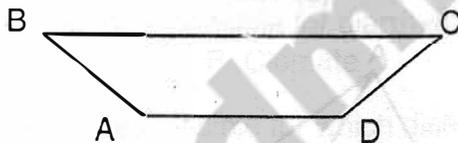
10. A trader purchased some pen for Tk. 120. If the price of each pen were Tk. 3 less, he would have got 2 more pens. How many pens did he buy?  
 (a) 6 (b) 8 (c) 10 (d) 12

11. If  $x/4 - 8/x = 1$ ,  $x = ?$   
 (a) -2 (b) -4 (c) 8 (d) both a & b

12. The total price for a watch and a chain is Tk. 500. If the price of the watch increases by 10% and that of the chain by 5%, the total price becomes Tk. 545. What is the price of the chain?  
 (a) 75 (b) 80 (c) 100 (d) 120

13. 80 apples were stored in two baskets in such a way that 6 times the content of the larger basket is 16 more than 10 times the content of the smaller basket. How many apples were stored in the smaller basket?  
 (a) 20 (b) 23 (c) 24 (d) 25

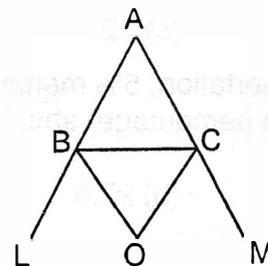
14. In the figure,  $AD \parallel BC$ ,  $AB = 5$  cm and  $AD = 7$  cm. If  $\angle BCD = \frac{1}{2} \angle BAD$ , what is the length of BC in cm?  
 (a) 10 (b) 12 (c) 17 (d) 19



15. Seven kg of mangoes cost as much as 10 kg of apples and 1 kg of oranges. 7 kg of oranges cost as much as 1 kg of mangoes and 2 kg of apples. How many kg of apples can be purchased by the amount of money required to purchase 12 kg of mangoes?  
 (a) 8 (b) 14 (c) 16 (d) 18

16. If 9 men or 15 women can do a work in 16 days, how long will it take 3 men and 7 women to complete the job?  
 (a) 12 (b) 15 (c) 18 (d) 20

17. In  $\triangle ABC$ ,  $\angle A = 40^\circ$ ,  $\angle OBL = \angle OBC$  and  $\angle OCB = \angle OCM$ . Calculate the value of  $\angle BOC$ .  
 (a)  $60^\circ$  (b)  $70^\circ$   
 (c)  $80^\circ$  (d)  $90^\circ$





18. You can now purchase 5 more bananas with tk. 75 due to a reduction in price by 20%. Calculate the current price of one dozen of Bananas.  
(a) 24                      (b) 30                      (c) 32                      (d) 36
19. In an exam, 90% passed History and 85% passed English. If none of the students failed in both subjects and 225 passed in both subjects, calculate the number of students who have attended the exam.  
(a) 250                      (b) 275                      (c) 300                      (d) 325
20. Two cars start towards the same destination at the same time. One car is 5 km behind the other. If the speed of the car at the front is 750 m/min and that of the other car is 1000 m/min, after how many minutes will the two cars meet?  
(a) 20                      (b) 24                      (c) 25                      (d) 30

**Section 4: English**

**Directions for Questions 1 to 5:** For each question choose the most correct form of sentence mark your choice on the Answer Sheet accordingly.

1. (a) I would have rather shaven my head than gone out in that ridiculous outfit.  
(b) I would rather shave my head than go out in that ridiculous outfit.  
(c) I would of rather shaven my head than go out in that ridiculous outfit.  
(d) I rather would shave my head than go out in that ridiculous outfit.  
(e) I would rather have shaven my head than go out in that ridiculous outfit.
2. (a) I've never had any other ambition than to be a musician.  
(b) I never have any other ambition than to be a musician.  
(c) I've never had no ambition other than to be musician.  
(d) I've hardly ever had any ambition than to be a musician.  
(e) I've never had any other ambition than being a musician.
3. (a) Theirs have been a long and happy marriage.  
(b) Their has been a long and happy marriage.  
(c) A long and happy marriage have been theirs.  
(d) Theirs has been a long and happy marriage.  
(e) Theirs been a long and happy marriage.
4. (a) Ireland seconds Japan in the number of engineering graduates.  
(b) Ireland is only second to Japan in the proportion of engineering graduates.  
(c) Ireland only is second to Japan in the proportion of engineering graduates.  
(d) Ireland is second to Japan's first in the proportion of engineering graduates.  
(e) Ireland is second only to Japan in the proportion of engineering graduates.
5. (a) McGrath is considered widely as Australia's most lethal weapon.  
(b) Widely, McGrath is considered as Australia's most lethal weapon.  
(c) McGrath is widely considered as Australia's most lethal weapon.  
(d) McGrath is widely considered as Australia's lethal most weapon.  
(e) McGrath is considered in Australia the team widely as a most lethal weapon.

**Directions for Questions 6 - 10:** Select the word/set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole and mark your choice on the Answer Sheet accordingly.

6. A serious study of physics is impossible \_\_\_\_\_ some knowledge of mathematics.  
(a) not with (b) without                      (c) in absence of                      (d) lacking                      (e) not having





7. \_\_\_\_\_ together in one place, they form a community.  
 (a) When people who live (b) People living (c) Whenever people living.  
 (d) When people living (e) Whenever people live
8. \_\_\_\_\_ Bangladesh, the general movement of air is from South to North.  
 (a) For (b) Regarding (c) Across (d) Over (e) Everywhere
9. Not until the seventeenth century \_\_\_\_\_ to measure the speed of light.  
 (a) did anyone even attempt (b) did even attempt anyone  
 (c) anyone did even attempt (d) none did attempt  
 (e) did none attempt even
10. I \_\_\_\_\_ to hospital last Friday.  
 (a) would go (b) must go (c) have to go (d) had to go (e) have gone

**ANSWER KEY**

**Section 1: Physics**

1	A	2	C	3	C	4	A	5	D
6	C	7	D	8	D	9	A	10	D
11	C	12	B	13	A	14	D	15	A
16	B	17	B	18	C	19	D	20	A

**Section 2: Chemistry**

1	C	2	B	3	A	4	D	5	B
6	C	7	D	8	D	9	A	10	C
11	D	12	C	13	A	14	D	15	B
16	D	17	D	18	B	19	B	20	C

**Section 3: Math**

1	C	2	D	3	D	4	B	5	C
6	C	7	D	8	D	9	A	10	B
11	A	12	C	13	B	14	B	15	D
16	D	17	B	18	D	19	C	20	A

**Section 4: English**

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

