

**MODEL PAPER OF ENTRANCE EXAMINATION FOR ADMISSION TO
THREE YEARS DIPLOMA PROGRAM IN ENGINEERING**

PHYSICS	
1	Energy in the sun is generated mainly by a.chemical reaction b.fission of heavy nuclei c. fusion of hydrogen atoms d. none of these
2	The calorific value of LPG is a.150 kj/g b 50 kj/g c. 6 kj/ g to 8 kj/ g d .17 kj/g
3	The LPG contains mainly a propane b butane c ethane d propane , ethane , butane are in equal amounts
4	When white light is passes through a glass prism one gets spectrum on the other side of prism. In the emergent beam, the ray which is deviated maximum a .green b. red c. yellow d. violet
5	. Star twinkle is due to a refraction b. reflection c. scattering d polarization
6	Which of the following does not change when light goes from one medium to onother a. frequency b. wavelength c. speed d. intensity
7	The power of a concave lens of focal length 2 m is a. -2 D b. + 1/ 2 c . - 1/2 d . None of these
8	When a convex lens and concave lens of equall focal lenth are combined, then power of the combination is a + 1D b. 0 D c. infinity d. none of these
9	Magnetic field produced by straight current carrying conductor is a. is directly proportional to magnitude of current b.. is inversly proportional to square of current c. is inversely proportional to current d. does not depend on current
10	Two resistors of resistances one ohm each are connected in parallel. The resultant resistance is a. 2 ohm b. 1/2 ohm c 0 ohm d. none of these
11	One kilowatt hour of electrical energy is equal to how many joules a. 3600000 J b. 360000 J c. 36000 J d. none of these
12	Which statement is incorrect about an electrical fuse? a. fuse is always connected in series b. Fuse is connected in parallel in electrical circuit c. fuse should have low melting point d. none of these
13	The magnetic field inside a long straight solenoid carrying current a. is zero b. infinity c. is same at all points d . None of these
14	. Assuming all electrical energy in a wire is converted into heat energy. Then which of the following relation represent heat energy produced a. I^2Rt b IR^2t c I^2R^2t d None
15	The velocity of light in glass will be a. less than that in water b. greater than that in water c. same as in water d. none of these
CHEMISTRY	
16	What is rust? (a) Sodium Oxide (b) Iron oxide.(c) Copper Oxide.(d) Silver Oxide.
17	Because of the formation of which of the following lime water turns milky when carbon dioxide is passed in it? (a) Calcium Carbonate(b) Calcium bicarbonate(c) Calcium hydroxide(d) Sodium carbonate
18	Which of the following is formed when sodium hydroxide reacts with hydrochloric acid? (a) Calcium chloride(b) Hydrogen Chloride(c) Sodium Hydroxide(d) Sodium Chloride
19	Hydrolysis of water is which type of following reactions? (a) Endothermic(b) Decomposition(c) Both (a) and (b)(d) Combination

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20	Which of the following is acid? (a) Lemon juice.(b) Soft drink.(c) Soap solution.(d) Lime water.
21	What is the taste of acid? (a) Sour(b) Salty(c) Bitter(d) Sweet
22	Phenolphthalein does show which of the following colour with acid? (a) Red(b) Pink(c) Blue(d) No colour
23	Which of these metals exists as liquid at room temperature? a) Gallium b) Cesium c) Mercury d) Sodium
24	Which of these metals can be easily cut with a knife? a) Zincb) Almuniumc) Gold d) Sodium
25	Which of these non-metals is a good conductor of electricity? a) Diamond b) Mercury c) Graphite d) Iodine
26	Ethanoic acid is also known as which of these? a) Citric acidb) Nitric acidc) Acetic acidd) Formic acid
27	Soaps are esters of which type of acids? a) Formic acidb) Fatty acidc) Inorganic acidd) Acetic acid
28	Which of these is not an organic acid? a) Nitric acidb) Formic acidc) Acetic acidd) Tartaric acid
29	Which of the following is the correct order of size? a) $I^+ > I^- > I$ b) $I^- > I > I^+$ c) $I > I^+ > I^-$ d) $I > I^- > I^+$
30	The period that contains only gaseous elements are: a) 1 b) 2 c) 3 d) 4

MATHEMATICS

31	H.C F of 26 and 91 is 12 b) 13 c) 11 d) 14
32	The value of Pie(π) is 3.14 b) 22/7 c) both (a) & (b) d) none
33	The system of equation $x+2y= 3$ & $2x+4y=3$ has a) Exactly two solutions b)no solution c) a unique solution d) infinitely many solutions
34	Degree of a zero polynomial is..... (a) One (b) zero (c)not defined (d) all of these
35	If one root of the polynomial $P(X)=5X^2+13X+K$ is the reciprocal of the other,then the value of K is a) 4 b) 5 C)6 d) 7
36	A linear equation in two variables represents a) A point b) a line c) a circle d) all of these
37	Which of the following is/are quadratic equation a) $(x-2)^2(x-1) = (x-4)(x+3)$ b) $x^2+\sqrt{x}+2$ c) $(x-4)(x-3)=(x-3)(x^2-4)$ d) all of these
38	The sum of two numbers is 42 and their product is 437.Then the absolute difference between the numbers is a) 3 b) 4 c) 5 d) 6
39	How many three digit numbers are divisible by 7 a) 125 b)128 c) 156 d) 100

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40	If $\tan\theta = 5/12$. Then $\cos\theta$ is equal to a) 5/13 b) 12/13 c) 13/5 d) 13/12
41	What is the length of the side of a square whose area is 441 m ² a) 20 m b) 24m c) 21m d) 23m
42	If $\sec^2\theta - 1 = \tan\theta$ then $\operatorname{Cosec}^2\theta =$ a) $1 + \cot^2\theta$ b) $1 - \cot^2\theta$ c) $1 + \tan^2\theta$ d) $1 - \tan^2\theta$
43	Volume of sphere is equal to a) $\frac{2}{3}\pi R^2$ b) $\frac{4}{3}\pi R^3$ c) $\frac{4}{3}\pi R^2$ d) $\frac{2}{3}\pi R^3$
44	A die is thrown once, what is the probability of getting a prime number a) 3 b) 1/3 c) 1/2 d) 2
45	If $\tan A = \cot B$, Then $A+B =$ a) 45° b) 90° c) 60° d) 30°
ENGLISH	
46	Fill in the blanks with suitable demonstrative pronouns -----is my book and -----is yours. a. These, those. b) this, that. c) those, this d) this, these.
47	Insert article in the following sentence Alexandar the great was ----- brave soildier. a) an b) the c) a d). none
48	Change the voice: She sings a song a) She sang a song b) A song was being sung by her c) A song is sung by her d) None of the above.
49	. identify the Gerund in the following: I prefer playing to sitting idle a) prefer b) playing c) playing and sitting d) idle
50	Insert suitable preposition in the following: What is the time ---- your watch a) in b) by c) of d) none
51	Pick out conjunction in the following sentence: Wait ----- he comes back a) comes b) wait c) till d) no conjunction found
52	Wear and tear means a) to wear b) to cry c) damage d) help.
53	cobbler is a person who ---- the shoes a) makes b) sells c) mends d) none
54	Change to indirect: She said to me, "You can use your pen". a) She told me that i can use my pen b) She told me that i could use my pen c) She told me that my pen can be usedd) None of the above

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55	Correct the following sentence: She's gone win a. she's going to win b. she gone to win c. both a and b d. none
56	Change the following noun Flower into adjective a. flower b. flourish c. flowery d. none
57	It is rather hot. You -----put the fan on (suggestion) a. might b. may c. will d. none
58	Pick out the right word His effort was all in ----- a. vein b. vain c. vane d. none
59	The antonym for the word Prohibit is: a. restrict b. permit c. both a and b d. none
60	Add suffix to the following word 'Bull'. a. ock b. kin c. both a and b d. none.