No. F-31 (V)/DJB/Dir. (A&P)/2012/1573
DELHI JAL BOARD: GOVT. OF N.C.T. OF DELHI
OFFICE OF THE DIRECTOR (ADMN. & PERSONNEL)
VARUNALAYA PHASE-II, KAROL BAGH, NEW DELHI – 110 005

139069

Dated:- 26.12.2012
27

CIRCULAR

Subject :- Sample paper for Limited Departmental Competitive
Examination for the post of JE (E&M).

The syllabus for conducting Limited Departmental Competitive Examination for the post of JE (E&M) was circulated vide AC(T)'s circular no. DJB/AC (T)/JE (E&M)/Apptt./2011/ 62622 to 62879 dated 13.06.2012. It is, hereby circulated for information of all aspiring candidates that the Limited Departmental Competitive Examination for the post of Junior Enginner (E&M) will be conducted very soon. Further to enable the aspiring candidates to familiarise with the pattern of examination, a Sample Question Paper alongwith the answers, is hereby, circulated for information.

All the DDO's are requested to circulate the sample paper amongst all concerned officials working under them who have applied for the post of JE (E&M). Further, a copy of this circular may also be displayed on the Notice Board by the DDO's.

This issues with the approval of Competent Authority.

Encl.as above.
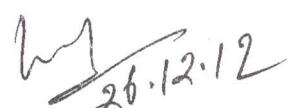
(U.B. Tripathi)
Director (A&P)

EE (EDP)

All DDO's
1. CEO/All Members, DJB/CVO/Addl.CEO/Secy. DJB/All Directors.
2. All CEs/SEs/EEs/Jt. Directors (Rev.).
3. ACs/DOV/DD (Vig.)/LO/Dy.Dir.(LW).
4. Dy. Directors (F&A)/AO/ZRO/CR Cell.
5. Consultant (PR)- to publish in Varun Patrika.
6. EE(EDP)- to upload it on the website of DJB.
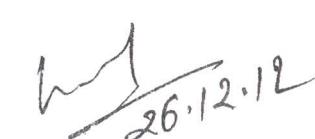
Director (A&P)
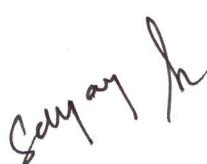
Q.1 State State whether the following statements are
technically TRUE (T) or FALSE (F)

	T	F
(i) $sin\theta = cos\theta$ when $\theta = 405°$.	☐	☐
(ii) A square and rhombus differ in only in the magnitude of their internal angles	☐	☐
(iii) The ratio of two sides of A4 A4 Paper is $1 : \sqrt{2}$	☐	☐
(iV) speed is a vector quantity	☐	☐

2.2. Write the correct Answers for the following
questions.

(i) What is the unit of electric power in India?

(ii) What is meant by Afforestation?

(iii) what is the weight of one carat of diamond?

(iV) which is the longest dam in India?

Q.3 Give the Full Form of the following.

(i) ~~DGP~~ IBR

(ii) PH

(iii) ISO - 9000

(iV) ~~CPC~~ CVC

Q.4 choose the correct answer.

(1) which among the following is an element?
(Alumina / Brass / Graphite / Silica

(ii) the brain of a computer is:
(CD / CPU / Monitor / Floppy Disc)

(iii)   Dialysis is used to perform the function of the:

(Lungs / Heart / Liver / Kidneys

(iv)   Excise Duty   is the Govt tax on the goods

(within the country / Imported from other countries)

55   Answer the following questions.

(i)   Compute the average of the following data

Number	1	2	3	4	5
Frequency	1000	1000	1000	1000	1000

(ii)   What is the area of each trapezium in the following :
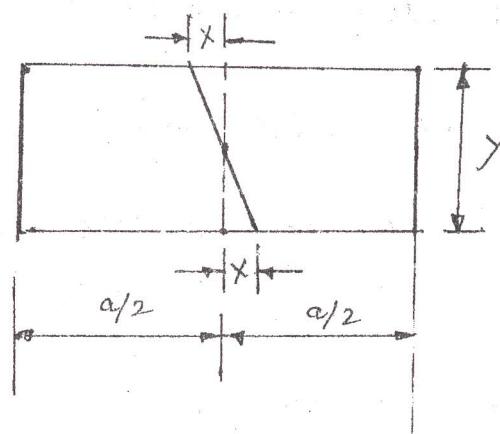
(iii)   Make a Symbol of ~~British~~ currency – British Pound

(iv)   ~~What~~ which gas is used for ~~converting vegetable~~ oils into saturated fats ?

KEY - General Awareness

Q.1. (i) T. (ii) T (iii) T (iv) F

Q.2 (i) Kilowatt
(ii) Planting more trees
(iii) 200 mg
(iv) Hirakund dam.

Q.3 (i) Indian Boiler Regulation
(ii) Power of hydrogen
(iii) ~~Indian~~ International organisation Standard - 9000.
(iv) Central Vigilence Commission.

Q.4 (i) Graphite
(ii) CPU
(iii) Kidneys
(iv) Within the country

Q.5 (i) 3
(ii) .24/2
(iii) £
(iv) ~~Hydrogen~~

ENGLISH

(1) choose alternative to the underlined part, which
way improve the sentence

(i) Whether this medicine <u>will help him or will
disable him</u> is still to be seen.

   (a) would help him or disable him

   (b) will help him or disable him

   (c) would have helped him or disabled him

   (d) no improvement

(2) There is a sentence of which some parts have
been jumbled up. Rearrange there parts which
are labelled P, Q, R and S to produce the
correct sentence.

   (i) Rams
      P — who studied
      Q — in the same school
      R — paid the fees of his friend
      S — who is rich

   (a) PQRS   (b) SRPQ

   (c) RSPQ   (d) SRQP

(3) Out of the four alternatives, select the one which best
expresses the same sentence in passive voice, given
in active voice.

   (i) The clown was being laughed at by them

   (a) They were laughing the clown.

   (b) they were laughing on the clown.

   (c) The clown was laughed at by them

   (d) They were laughing at the clown.

Find the grammatical error in the parts of the sentence given. The number of that part is the answer. Ignore the errors of punctuation, if any.

(1) The boy asked   his father why
     —————————   ——————————
         (a)   (b)

         he   cutting   down the tree
         ——————————   ——————————
            (c)   (d)

(5) In the following question, four words are given. In each question, one word is mis spelt. Find the mis spelt word.

     (a) ACCORDANCE

     (b) ADHERANCE

     (c) PURSUANCE

     (d) RELEVANCE

Multiple choice question Paper (Electrical Engg.)

Note: Choose the best option of the answers

Q.1   Total number of electrons available in an electric charge of 1.6 µC are

A) 10^{19}

B) 10^{16} e

C) 10^{12}

D) 10^{13}

Q.2.   A 5 Joule of work is done by a 2 C of charge moving from point A to B. Then, how much potential difference between point A and B

A)   10 V

B)   0.4 V

C)   2.5 V

D)   5 V

Q.3   A 25 µC of electric charge is flowing in 2.5 µS time. Now, the amount of electric current will be

A)   62.5 A

B)   10 A

C)   0.10 A

D)   100 A

Q.4   A wire of resistance R , its length is increased to double and its radius is reduced to half. The new value of wire resistance will be

A)   R

B)   2R

C)   4R

D)   8R

Q.5   One unit or 1 KWh of electric energy is equivalent to

A) 3.6×10^6 J

B) 3.6×10^5 J

C) 3.6×10^3 J

D)   3.6 J

Q.6   Electric motor works on

A)   Fleming's left hand rule

B)   Fleming's right hand rule

C)   Faraday's law

D)   Lenz's law

Q.7   Transformer can work on

A)   D.C supply only

B)   A.C supply only

C)   A.C and D.C both

D)   all of these

Q.8   For charging of secondary cells, we need
  A)   D.C supply only
  B)   A.C supply only
  C)   A.C and D.C both
  D)   None of these

Q.9   Earthing is required in a electrical installation for
  A)   Human safety
  B)   Machine/ system safety
  C)   for A) and B) both
  D)   none of these

Q.10   In a electrical power system , power factor (cos Φ) is always
  A)   equal to unity
  B)   greater than unity
  C)   less than unity
  D)   can be infinity

Note :— Tick the correct answer (Mechnical Engj)

Que 1 — A Screw jack used for lifting the loads is

(a) A reversible machine (b) A non-reversible machine (c) An ideal machine

(d) None of these.

Que 2 :- With in elastic limit, shear stress is ------- shear strain.

(a) equal to   (b) Less than   (c) greater than (d) directly proportional to (e) inversely proportional to

Que 3 :- The pressure of a liquid measured with the help of piezometer tube is —

(a) Atmospheric pressure   (b) Gauge pressure

(c) Absolute pressure   (d) Vacuum pressure.

Que 4 :- A closed vessel made of steel and used for the generation of steam is called   (a) steam condenser   (b) Steam turbine

(c) steam boiler   (d) Steam injector

Que 5 — A diesel engine has   (a) one valve   (b) two valves

(c) three valves (d) four valves

Que 6 :- If the speed of the engine is increased, the indicated horse power will   (a) increase (b) decrease (c) remain same

Que 7 :- The size of a gear is usually specified by :

(a) Pressure angle (b) circular pitch   (c) Diametral pitch (d) Pitch circle diameter.

Que 8 :- The Sand used for making cores is :

(a) green sand (b) dry sand (c) parting sand (d) ~~oil~~ oil sand

Que 9 :- In welding, the acetylene Cylinder is usually painted with —

(a) Black colour   (b). white colour (c) maroon colour (d) yellow colour.

Q 10 :- The lead screw of a lathe has ------- threads

(a) Single start   (b) double start   (c) Multi start

(d) None of these   (e) All of the above