

**Dhaka University 'Ka' Unit
Model Test-2009-10**

গ্ৰন্থবিহীন কৰ্মৰ দ্বাৰা আৱৰ্ণিত কৰা পৃষ্ঠা
(omeca-ৰি কৰ্মৰ গ্ৰন্থৰ আৱৰ্ণিত কৰা পৃষ্ঠা)

খিৰ মেজৰে 'ব' গ
০ক০ BDWB
চ'গ এল'মেজ (ম'গ) ত'ক'ৰি বিজ্ঞান
2009 - 2010Bs

মগ : 1 ন'ল 45 ম'ল

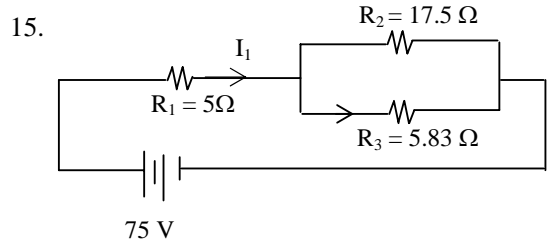
Set Code:

- 1| OMR DEICTI:
(K) Dcwi fivM wtrRi bvg, wczvi bvg l gvZvi bvg fivZcixivi Avte`bcit th fivq Ges thfite tj Lv AvtQ tmfiteB wj LtZ nte| ctektit thfite `vivi AvtQ, DEICTI wv`RvqMvq wK tmfiteB `vivi KitZ nte|
(L) cixiv_#K Roll No., Serial No. l Set Code wj tL msike`eE ciY KitZ nte|
- 2| ctektit cZK cke Pviw DEI t l qv AvtQ| mwK DEiw tetQ wbtq OMR DEICTI wv`Rvq Meltqi QtKi msike-Ni Kvjv Kwj i ej tcb w`tq m`uyf`c fivw KitZ nte| mwK DEI bv `vKtj metptq Dchp DEiw tetQ wbtZ nte|
- 3| cZ fj DEiti i Rb` 0.25 b` Kivlv hvte Ges Zv wvqv`EK mgstq Kiv nte|
- 4| GKB cke GKwaK DEI MhYthvM` nte bv|
- 5| ctektit dlv RvqMvq cqvRbtefta Calculation Kiv hvte| Avj v`v tKvb KvMR e`envi Kiv hvte bv|
- 6| Calculator e`envi Kiv hvte| Zte Programming Kiv hvq Ggb Calculator e`envi Kiv hvte bv|
- 7| cixiv tkl bv nl qv chS-cixiv Kq Z`vM Kiv hvte bv|
- 8| cixiv mgvbi mstKZ tkvbi m`m` cixiv`fj Lv eU Kitte Ges DEICTiw ch`e`K MhY bv Kiv chS-wB Rvmb Z`vM Kitte bv|
- 9| cixiv th tKvb iKg Am`vcv Ae j`b ev Ae j`bi tPov Kitj cixiv_#K em`wi Kiv nte Ges Zvi cixiv emZj etj MY` nte|
- 10| cixiv-Ktq tgvvBj tdiv e`envi m`uy`w`x Ges tKD e`envi Kitj Zv cixiv Am`vcv Ae j`b wntmte MY` Kiv nte|
- 11| mvaviYfite cixiv` i Physics, Chemistry, Mathematics Ges Biology GB Pvi wltqB DEI w`tZ nte| hv` tKvb cixiv`Pvivi gta` tKvb GKw ev `v wltq D`P-gva`vgK ev mgv`bi ch`q Aa`qb bv Kti `vtK, Zvntj Zvi cwietZ` Bangla A`ev/Ges English wltq cixiv w`tq Pviw wltq ciY Kitte|
- 12| Physics, Chemistry, Mathematics Ges Biology D`P-gva`vgK ch`q Aa`qb Kiv m`Ej tKD B`Qv Kitj `i`gv` PZL` wltqi cwietZ`Bangla A`ev English wltq DEI w`tZ cvi te|
- 13| Pviw AwaK wltq DEI Kitj DEICTI gj`vqb Kiv nte bv|

C`v`e`Ávb (Physics)

- GKw e⁻i 1g 6sec G MoŧeM 60ms⁻¹ Ges cieZx^o 6sec G MoŧeM 30ms⁻¹ | teM cwieZŧbi nvi mgvb ntj , 6th sec G AwZµvš⁻ i Zj KZ ?
(A) 99.2 m (B) 5 m
(C) 205 m (D) 102.5 m
- 1000 kg l Rŧbi tšKv cwbŧZ fvmgvb Ae⁻vq Gi `B cš-t₁K `Rb Weyj x 5ms⁻¹ AbyfngK teŧM Svc w`j | Weyjxŧtqi fi h_vµtq 125 l 150 kg ntj tšKv tKvb w`ŧK KZ teŧM MwZkj nŧe ?
(A) 0.125 ms⁻¹ ; 1g Weyjxi w`ŧK
(B) 0.25ms⁻¹ ; 1g Weyjxi w`ŧK
(C) 0.125 ms⁻¹ ; 2q Weyjxi w`ŧK
(D) 0.25ms⁻¹ ; 2q Weyjxi w`ŧK
- GKw Lubi LubMŧŧF^o AwfKlR ZjY Ges feŧoi AwfKlR ZjYi AbcvZ 0.999 ntj Lubi Mfxi Zv KZ ? (R = 6.38 × 10³ km.)
(A) 6.29 km (B) 6.38 × 10²km
(C) 6.38 km (D) 3.19 km
- tKvb Aŧ mŧŧŧŧŧ GKw e⁻i RoZvi ävgK 200kgm². D³ Aŧ mŧŧŧŧŧ e⁻wi PµMwzi e⁻vmv^oKZ ? (e⁻wi l Rb 19.6 N)
(A) 20 m (B) 10 m (C) 25 m (D) 5 m
- 10⁻³m e⁻vmv^o GKw cviŧ i tclwŧK ŧŧŧ GK wgvj qb (10⁶) mg AvqZb ŧŧ^o tclwŧ^o Zwi Kitj wK cwi gVY KVR m^oubwŧq ? (cviŧ i cŧwŧ = 550 × 10⁻³Nm⁻¹)
(A) 6.84 × 10⁻³J (B) 5.28 × 10⁻³J
(C) 6.84 × 10⁻² J (D) 6.84 × 10⁻⁴J
- hw tKvb e⁻i Zvcgvŧv 30°C ŧ₁K 20°C G bvgŧbv nq Zvntj cvŧi bnvBU ŧ⁻ŧj GB cwieZŧ KZ ?
(A) 18° F (B) 5° F (C) 9° F (D) 32° F
- N.T.P ŧZ evqj AY_y wj i Mo eMŧeŧMi eMŧj wbyŧ Ki | (N.T.P ŧZ evqj NbZ_i = 1.32 gm/litre.)
(A) 2.978 cms⁻¹ (B) 3.62 cms⁻¹
(C) 2.38 × 10⁴cm/s (D) 4.798 cms⁻¹
- tKvb e⁻v 1500J Zvc ŧkVY Kŧi Ges 82J KVR m^ouv^o b Kŧi | e⁻vi Aš⁻kw³i cwieZŧ wbyŧ Ki |
(A) 1233 J (B) 628 J
(C) 1418 J (D) 2322 J
- 400K Zvcgvŧvi GKw Kŧe⁻ 300K Zvcgvŧvi GKw Kŧe⁻ ŧviv cwiŧewŧZ AvŧQ | `w e⁻i ga⁻eZx^o vb evqkŧ iLv ntŧŧQ | cŧg e⁻wi wewKitŧYi nvi wbyŧ Ki | (σ = 5.67 × 10⁻⁸ Wm⁻²k⁻⁴).
(A) 299.25 Wm⁻² (B) 322.98 Wm⁻²
(C) 992.25 Wm⁻² (D) 176.57 Wm⁻²
- tKvb Kvŧb^oBwAb 500K Zvcgvŧvi Zvc Drm ŧ₁K 1250 J Zvc MŧY Kŧi Ges Zvc MŧŧK 700 J Zvc eRŧ Kŧi | BwÄŧbi `ŧZv KZ ?
(A) 20% (B) 64%
(C) 75% (D) 44%

- 0°C DŧZvq Ges 720mm Pŧŧc nBŧWŧRb M^ovŧm kŧai teM 1302ms⁻¹. N.T.P-ŧZ H M^ovŧmi teM KZ ?
(A) 2340 ms⁻¹ (B) 676 ms⁻²
(C) 923 ms⁻¹ (D) Acwi ewZ^o vKŧe
- `Bw wDwŧbs dK^oA l B GKŧŧ kŧ Kitj cŧZ tmŧKŧŧ 5w eŧw tKvb hvq | A ŧK GKw Nŧi wŧj eŧw DrmŧEi nvi teŧo hvq | B Gi K^ouv^o 510 Hz ntj A Gi K^ouv^o KZ wŧj ?
(A) 515 Hz (B) 520 Hz
(C) 510 Hz (D) 505 Hz
- 330 Hz ŧgŧŧj K K^ouv^o wewkŧ GKw ŧLvj v ewk `Zwi Kitj b-bZg KZ `ŧN^o ewki cŧŧqRb ?
(A) 0.2 m (B) 5 m
(C) 0.5 m (D) 2 m
- 5 cm l 15cm e⁻vŧmi `Bw Acwievŧ avZe ŧMvj ŧK h_vµtq 22 Ges 35 GKK PVR^oAvŧQ | Gŧ i Zj gwŧ^o K NbŧZj AbcvZ tei Ki |
(A) 286 : 29 (B) 99 : 17
(C) 198 : 35 (D) 396 : 73



- wŧŧvŧvq, I₁ = KZ ?
- (A) 17.5 Amp (B) 16 Amp
(C) 4 Amp (D) 8 Amp
 - tKvb tivŧai Mŧŧ h_vµtq njŧ, te₃w l ev^ovgx is Gi cwiŧ^o AvŧQ | Gi tivŧai gvŧ KZ ?
(A) 4700 Ω (B) 2300 Ω
(C) 230 Ω (D) 470 Ω
 - tKvb w K cwieZx^ocŧvŧni kŧŧgv 5A Ges Gi K^ouv^o 60Hz. Gi Mo eMŧeŧMi eMŧj i gvŧ KZ ?
(A) 2.63 A (B) 3.535 A
(C) 5.3 A (D) 9.32 A
 - mŧŧ₁K Avŧj v c_wextZ AvŧŧZ 16 × 10⁻⁶ Avŧj vK ermi mgq j vŧM | c_wextZ mŧŧ^o i Zj KZ ?
(A) 2.632 × 10² mile (B) 7.254 × 10⁷ mile
(C) 9.385 × 10⁷ mile (D) 6.234 × 10⁷ mile
 - 20 cm tclvKv mŧŧZj AeZj `cŧYi KZ `ŧi e⁻ i vLŧj 4_y wewvZ w^ocvl qv hvŧe ?
(A) 25 cm (B) 20 cm
(C) 10 cm (D) 5 cm
 - cwbi wŧŧeAw⁻Z ewZ ntZ wMŧ^o i wŧŧ Dcwi Zŧj 35° ŧKŧY cŧZmZ nq | AvZb ŧKvY KZ ? (μ = 4/3)
(A) sin⁻¹ (.262) (B) sin⁻¹ (.375)
(C) sin⁻¹ (.427) (D) sin⁻¹ (.592)

- (A) C₄ D₁ M₁ T₁ (B) C₃ D₁ M₁ T₁
 (C) D₁ F₁ Q₁ U₁ Z (D) T₁ K₁ V₁ W₁ B₁ Q
117. n₁ v₁ B₁ T₁ W₁ T₁ m₁ i f i m g v b c h q i D₁ v₁ M₁ C₁ w₁ b₁ t₁ g₁ i₁ t₁ K₁ v₁ w₁ U₁ ?
 (A) *Utricularia* (B) *Hydrilla*
 (C) *Trapa* (D) *Phragmites*
118. B₁ t₁ K₁ v₁ c₁ i₁ K₁ P₁ D₁ v₁ n₁ i₁ Y₁ t₁ K₁ v₁ w₁ U₁ & ?
 (A) e₁ j₁ v₁ M₁ r₁ W₁ B₁ (B) m₁ y₁ i₁ e₁ b₁
 (C) K₁ K₁ w₁ i₁ - g₁ K₁ w₁ i₁ (D) m₁ v₁ d₁ w₁ i₁ c₁ v₁ K₁ ©
119. t₁ g₁ t₁ U₁ t₁ j₁ i₁ c₁ U₁ g₁ m₁ f₁ i₁ e₁ w₁ z₁ μ₁ g₁ t₁ K₁ v₁ w₁ U₁ ?
 (A) A₁ m₁ u₁ Y₁ C₁ K₁ U₁ Z₁ v₁ (B) G₁ i₁ C₁ ÷ w₁ U₁ m₁
 (C) c₁ w₁ i₁ c₁ i₁ K₁ w₁ R₁ b₁ (D) m₁ u₁ i₁ K₁ w₁ R₁ b₁
120. i₁ μ₁ v₁ Y₁ j₁ t₁ j₁ R₁ M₁ v₁ t₁ b₁ A₁ s₁ k₁ M₁ h₁ Y₁ K₁ t₁ i₁ -
 (A) i₁ v₁ B₁ t₁ e₁ r₁ t₁ R₁ v₁ g₁ (B) g₁ v₁ B₁ t₁ U₁ v₁ K₁ w₁ U₁ t₁ q₁ v₁
 (C) w₁ b₁ D₁ w₁ k₁ e₁ q₁ v₁ m₁ (D) t₁ m₁ w₁ U₁ j₁

English

Read the following passage and answer the questions 121-125 :

Many great inventions are greeted with ridicule and disbelief. The invention of the airplane was no exception. Although many people who heard about the first powered flight on December 17, 1903, were excited and impressed, others reacted with peals of laughter. The idea of flying an aircraft was repulsive to some people. Such people called Wilbur and Orville Wright, the inventors of the first flying machine, impulsive fools. Negative reactions, however, did not stop the Wrights. Impelled by their desire to succeed, they continued their experiments in aviation.

Orville and Wilbur Wright had always had a compelling interest in aeronautics and mechanics. As young boys they earned money by making and selling kites and mechanical toys. Later, they designed a newspaper-folding machine, built a printing press, and operated a bicycle-repair shop. In 1896, when they read about the death of Otto Lilienthal, the brother's interest in flight grew into a compulsion.

Lilienthal, a pioneer in hang-gliding, had controlled his gliders by shifting his body in the desired direction. This idea was repellent to the Wright brothers, however, and they searched for more efficient methods to control the balance of airborne vehicles. In 1900 and 1901, the Wrights tested numerous gliders and developed control techniques. The brothers' inability to obtain enough lift power for the gliders almost led them to abandon their efforts.

After further study, the Wright brothers concluded that the published tables of air pressure on curved

surfaces must be wrong. They set up a wind tunnel and began a series of experiments with model wings. Because of their efforts, the old tables were repealed in time and replaced by the first reliable figures for air pressure on curved surfaces. This work, in turn, made it possible for them to design a machine that would fly. In 1903 the Wrights built their first airplane, which cost less than one thousand dollars. They even designed and built their own source of propulsion- a lightweight gasoline engine. When they started the engine on December 17, the airplane pulsed wildly before taking off. The plane managed to stay aloft for twelve seconds, however, and it flew one hundred twenty feet.

By 1905 the Wrights had perfected the first airplane that could turn, circle, and remain airborne for half an hour at a time. Others had flown in balloons or in hang gliders, but the Wright brothers were the first to build a full-size machine that could fly under its own power. As the contributors of one of the most outstanding engineering achievements in history, the Wright brothers are accurately called the fathers of aviation.

121. The idea of flying an aircraft was ___ to some people.
 (A) boring (B) distasteful
 (C) exciting (D) needless
122. People thought that the Wright brothers had _____.
 (A) acted without thinking
 (B) been negatively influenced
 (C) been too cautious
 (D) had not given enough thought
123. The Wright's interest in flight grew into a _____.
 (A) financial empire (B) plan
 (C) need to act (D) foolish thought
124. Lilienthal's idea about controlling airborne vehicles was ___ the Wrights.
 (A) proven wrong by (B) opposite to the ideas of
 (C) disliked by (D) accepted by
125. The old tables were ___ and replaced by the first reliable figures for air pressure on curved surfaces.
 (A) destroyed (B) canceled
 (C) multiplied (D) discarded
126. Complete the sentence: I took part in a _____.
 (A) three hours examination
 (B) three-hour examination
 (C) three-hours examination
 (D) three-hour examinations
127. The correct translation of the sentence that follows is: 'তখনও চারিদিক বেশ অনধকার'

- (A) Still that was dark all around.
 (B) It is still dark all around.
 (C) It was still dark all around.
 (D) It was dark still then.

128. The correct translation of the sentence that follows is: 'প্রাচীনকালে মানুষ অত্যন্ত অসহায় ছিল'

- (A) Man was very helpless in old age.
 (B) In ancient time, men were very helpless.
 (C) In ancient time, men was very helpless.
 (D) In ancient time, man were very helpless.

129. The correct translation of the sentence that follows is: 'ক্রীড়াবিদগণ সংবাদপত্রের মাধ্যমে পৃথিবীর বিভিন্ন স্থানের গুরুত্বপূর্ণ খেলাধুলার ফলাফল প্রত্যক্ষ করতে পারে'

- (A) The sportsmen can see the results of important games in different parts of the world.
 (B) Sportsman see the results of important games in different parts of the world.
 (C) The sportsmen can see the result of important games in different parts of the world.
 (D) Sportsman can saw the result of important games in different parts of the world.

130. Choose the correct sentence:

- (A) She is junior to me by few years.
 (B) She is junior to me in few years.
 (C) She junior of me by few years.
 (D) She is junior from me by few years.

Choose the appropriate word/words: questions 131-133:

131. The deadline was nearby, so Mrs. Rafiq had her students their essays.

- (A) complete (B) to complete
 (C) completed (D) being completed

132. The department head insisted that he absolute authority to regulate office works.

- (A) gives (B) is given
 (C) would give (D) be given

133. Karim is among the few students we can rely for the organization of the charity exhibition.

- (A) who (B) with whose
 (C) in which (D) on whom

Choose the appropriate preposition: (134-136)

134. We know that Meera is capable ____ doing the work.

- (A) of (B) in
 (C) with (D) by

135. Everybody aspires ____ renown.

- (A) in (B) on
 (C) after (D) before

136. Tasnuva was infatuated ____ Russel.

- (A) for (B) in
 (C) with (D) at

No spelling error occurs in (questions 137-140):

137. (A) dilemma (B) dillemma
 (C) dilima (D) dilema

138. (A) pneumonnia (B) pneumonia
 (C) pneumonia (D) pneummonia

139. (A) superstision (B) superistision
 (C) superistition (D) superstition

140. (A) fullfil (B) fulfill
 (C) fulfil (D) fullfill

141. Change the voice of 'This has now been proved to be false':

- (A) They have now proved this to be false.
 (B) This now proves to be false.
 (C) Some one has proved this to be false.
 (D) This has now been being proved to be false.

142. Select the correct sentence:

- (A) The man was tall who stole my bag.
 (B) The man stole my bag who was tall.
 (C) The man stole my bag who is tall.
 (D) The man who stole my bag was tall.

143. The correct form of possessive has been maintained in:

- (A) Charles friend's loves Burns poems.
 (B) Charles' friend loves Burns' poems.
 (C) Charles friend love's Burn's poems.
 (D) Charles's friend loves Burn's poems.

144. Although Dhaka is densely populated, _____ live in Bandarban.

- (A) a lot of people (B) only a few people
 (C) some of the people (D) a little people

145. The more haemoglobin one has, the more oxygen is carried to _____ cells.

- (A) it's (B) its
 (C) one's (D) their

146. The passive of 'Do away with it'.

- (A) Let it be done away by you.
 (B) Let you be done away by it.
 (C) Let you be done away with it.
 (D) Let it be done away with.

Use the right tense:(questions 147-150)

147. If I had been you, I _____ away.

- (A) would have gone (B) would go
 (C) might go (D) went

148. The scientists believed that the sun ____ around the earth.

- (A) moves (B) moved
 (C) has moved (D) has been moving

149. Nowadays, he talks as if he ____ everything.

- (A) knew (B) had known
 (C) knows (D) was used to know

150. Rahim ____ his work by the time his friends arrived.

- (A) will finish (B) had finished
 (C) could finish (D) finished