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| SỞ GD&ĐT TỈNH BÀ RỊA VŨNG TÀU  **ĐỀ THAM KHẢO SỐ 10** | **KỲ THI TỐT NGHIỆP THPT 2022**  **MÔN: VẬT LÝ 12**  *Thời gian làm bài:50 phút;*  *(40 câu trắc nghiệm)* |

**Câu** **1.** Một sóng cơ hình sin truyền theo trục Ox. Công thức liên hệ giữa tốc độ truyền sóng v, bước sóng λ và chu kì T của sóng là

**A.** λ=v.T **B.** λ=v2.T **C.** λ=v/T2. **D.** λ=v/T.

**Câu** **2.** Trong bệnh viện có một loại tủ dùng để khử trùng những dụng cụ y tế sử dụng nhiều lần.

Khi hoạt động tủ phát ra bức xạ có tác dụng khử trùng là

**A.** Tia hồng ngoại. **B.** tia X. **C.** tia gamma. **D.** tia tử ngoại.

**Câu** **3.** Trong mạch dao động LC lí tưởng thì dòng điện trong mạch

**A.** ngược pha với điện tích ở tụ điện. **B.** trễ pha π/2 so với điện tích ở tụ điện.

**C.** cùng pha với điện điện tích ở tụ điện. **D.** sớm pha π/2 so với điện tích ở tụ điện.

**Câu** **4.** Hiện tượng cộng hưởng xảy ra khi tần số

**A.** của lực cưỡng bức bằng tần số riêng của hệ.

**B.** dao động bằng tần số riêng của hệ.

**C.** của lực cưỡng bức nhỏ hơn tần số riêng của hệ.

**D.** của lực cưỡng bức lớn hơn tần số riêng của hệ.

**Câu** **5.** Ánh sáng đơn sắc là ánh sáng

**A.** có một bước sóng xác định trong một khoảng nào đó.

**B.** không bị tán sắc khi đi qua lăng kính.

**C.** có vận tốc không đổi khi truyền từ môi trường này sang môi trường khác.

**D.** bị tách thành dải màu khi chiếu từ không khí vào nước.

**Câu** **6.** Khi chiếu chùm tia tử ngoại vào một ống nghiệm đựng dung dịch fluorexêin thì thấy

dung dịch này phát ra ánh sáng màu lục. Đó là hiện tượng:

**A.** phản xạ ánh sáng. **B.** hóa – phát quang. **C.** quang– phát quang. **D.** tán sắc ánh sáng.

**Câu** **7.** Máy phát điện xoay chiều một pha hoạt động dựa trên hiện tượng nào sau đây?

**A.** Hiện tượng tự cảm. **B.** Hiện tượng quang điện.

**C.** Hiện tượng cảm ứng điện từ. **D.** Hiện tượng cộng hưởng.

**Câu** **8.** Trong quá trình phóng xạ của một chất, số hạt nhân phóng xạ

**A.** giảm đều theo thời gian.  **B.** giảm theo đường hypebol.

**C.** không giảm.  **D.** giảm theo quy luật hàm số mũ.

**Câu** **9.** Điều nào sau đây đúng khi nói về dòng điện không đổi

**A.** có chiều thay đổi và cường độ không đổi.

**B.** có chiều và cường độ không đổi.

**C.** có chiều không đổi và cường độ thay đổi.

**D.** có chiều và cường độ thay đổi.

**Câu** **10.** Theo thuyết lượng tử ánh sáng, phát biểu nào sau đây đúng?

**A.** Phôtôn ứng với ánh sáng đơn sắc có năng lượng càng lớn nếu ánh đó có tần số càng lớn.

**B.** Năng lượng của phôtôn giảm dần khi phôtôn ra xa dần nguồn sáng.

**C.** Phôtôn tồn tại trong cả trạng thái đứng yên và trạng thái chuyển động.

**D.** Năng lượng của mọi loại phôtôn đều bằng nhau.

**Câu** **11.** Để phân biệt được sóng ngang và sóng dọc ta dựa vào

**A.** phương dao động và tốc độ truyền sóng **B.** tốc độ truyền sóng và bước sóng

**C.** phương dao động và phương truyền sóng **D.** phương truyền sóng và tần số sóng

**Câu** **12.** Tại nơi có gia tốc trọng trường g, một con lắc đơn dao động điều hòa với biên độ góc αo(rad). Biết khối lượng vật nhỏ của lắc là m(kg), chiều dài của dây treo là l(m), mốc thế năng tại vị trí cân bằng. Cơ năng của con lắc là

**A.** . **B.** . **C.** . **D.** .**(END.6410.00)**

**Câu** **13.** Tốc độ truyền sóng là tốc độ

**A.** dao động của các phần tử vật chất. **B.** dao động của nguồn sóng.

**C.** truyền năng lượng sóng. **D.** truyền pha của dao động.

**Câu** **14.** Đại lượng đặc trưng cho mức độ bền vững của hạt nhân là

**A.** năng lượng liên kết riêng. **B.** năng lượng liên kết.

**C.** khối lượng hạt nhân. **D.** độ hụt khối hạt nhân.

**Câu** **15.** Công thức đúng của định luật Culông là

**A.** . **B.** .

**C.** . **D.** .

**Câu** **16.** Phát biểu nào sau đây là **đúng** với mạch điện xoay chiều chỉ chứa tụ điện ?

**A.** Dòng điện sớm pha hơn điện áp một góc π/4.

**B.** Dòng điện sớm pha hơn điện áp một góc π/2.

**C.** Dòng điện trễ pha hơn điện áp một góc π/4.

**D.** Dòng điện trễ pha hơn điện áp một góc π/2.

**Câu** **17.** Trong hiện tượng giao thoa sóng trên mặt nước, khoảng cách giữa hai cực đại liên tiếp nằm trên đường nối hai tâm sóng bằng bao nhiêu?

**A.** Bằng hai lần bước sóng. **B.** Bằng một bước sóng.

**C.** Bằng một nửa bước sóng. **D.** Bằng một phần tư bước sóng.

**Câu** **18.** Hiện tượng điện phân không ứng dụng để

**A.** đúc điện. **B.** mạ điện. **C.** sơn tĩnh điện. **D.** luyện nhôm.

**Câu** **19.** Từ thông qua 1 vòng dây dẫn là Wb. Từ thông cực đại gửi qua mỗi vòng dây là

**A.** Wb. **B.** Wb.

**C.** Wb. **D.** Wb.

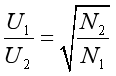
**Câu** **20.** Trong thí nghiệm Y-âng về giao thoa ánh sáng nếu biết khoảng cách giữa haikhe hẹp là a, khoảng cách từ mặt phẳng hai khe đến màn quan sát là D, ánh sáng thí nghiệm là ánh sáng đơn sắc có bước sóng λ. Khoảng cách giữa hai vân sáng liền kề là

**A.** . **B.** . **C.** . **D.** .

**Câu** **21.** Điều kiện để xảy ra cộng hưởng điện đối với mạch điện xoay chiều có R, L, và C nối tiếp là

**A.** . **B.** . **C.** . **D.** .

**Câu** **22.** Gọi U1, U2 và N1, N2 lần lượt là các điện áp và số vòng dây của cuộn sơ cấp và thứ cấp của một máy biến áp lý tưởng thì mối liên hệ nào sau đây là **đúng** ?

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**A.**  **B.**  **C.**  **D.**

**Câu** **23.** Đối với mạch điện xoay chiều chỉ chứa tụ điện có điện dung

C. Nếu tăng tần số của dòng điện lên 4 lần thì dung kháng của tụ điện sẽ

**A.** tăng 2 lần. **B.** giảm 4 lần. **C.** giảm 2 lần. **D.** tăng 4 lần.

**Câu** **24.** Hạt nhân  có cấu tạo gồm

**A.** 33 prôtôn và 27 nơtron.  **B.** 27 prôtôn và 60 nơtron.

**C.** 27 prôtôn và 33 nơtron. **D.** 33 prôtôn và 27 nơtron.

**Câu** **25.** Rôto của máy phát điện xoay chiều một pha là một nam châm có 3 cặp cực từ, quay với tốc độ 1200 vòng/phút. Tần số của cường độ dòng điện do máy tạo ra là

**A.** f = 40 Hz. **B.** f = 50 Hz. **C.** f = 60 Hz. **D.** f = 70 Hz.

***Câu*** ***26.*** Biểu thức nào sau đây là biểu thức tính gia tốc của một vật dao động điều hòa?

**A.** a = 4x. **B.** a = 4x2. **C.** a = – 4x2. **D.** a = – 4x.

**Câu** **27.**Sóng FM của đài tiếng nói Việt Nam có tần số f = 100 MHz. Bước sóng mà đài thu được có giá trị là

**A.** λ = 10 m. **B.** λ = 3 m. **C.** λ = 5 m. **D.** λ = 2 m.

**Câu** **28.** Trong thí nghiệm Y-âng về giao thoa ánh sáng, hai khe được chiếu bằng ánh sáng đơn sắc có bước sóng 0,6μm. Khoảng cách giữa hai khe sáng là 1mm, khoảng cách từ mặt phẳng chứa hai khe đến màn quan sát là 1,5m. Trên màn quan sát, hai vân tối liên tiếp cách nhau một đoạn là

**A.** 0,45 mm.  **B.** 0,6 mm.  **C.** 0,9 mm. **D.** 1,8 mm.

**Câu** **29.** Điện tích cực đại và dòng điện cực đại qua cuộn cảm của một mạch dao động lần lượt là Q0 = 0,16.10–11 C và I0 = 1 mA. Mạch điện từ dao động với tần số góc là

**A.** 0,4.105 rad/s. **B.** 625.106 rad/s. **C.** 16.108 rad/s. **D.** 16.106 rad/s.

**Câu** **30.** Một đoạn dây dẫn dài 0,8 m mang dòng điện 1,5A, đặt vuông góc trong một từ trường đều có độ lớn cảm ứng từ 0,12 T. Nó chịu một lực từ tác dụng là

**A.** 0,182 N. **B.** 1,44 N. **C.** 0,144 N. **D.** 0 N.

**Câu** **31.** Công thoát electron của một kim loại là 7,64.10-19J. Chiếu lần lượt vào bề mặt tấm kim loại này các bức xạ có bước sóng λ1 = 0,18 μm, λ2 = 0,21 μm và λ3 = 0,35 μm. Lấy h = 6,625.10-34 Js, c = 3.108 m/s. Bức xạ nào gây được hiện tượng quang điện đối với kim loại đó?

**A.** Hai bức xạ (λ1 và λ2).

**B.** Không có bức xạ nào trong ba bức xạ trên.

**C.** Cả ba bức xạ (λ1, λ2 và λ3).

**D.** Chỉ có bức xạ λ1.

**Câu** **32.** Một vật thực hiện đồng thời hai dao động điều hoà cùng phương, theo các phương trình: và . Biên độ dao động tổng hợp đạt giá trị nhỏ nhất khi

**A.** α = 0(rad). **B.** α = π(rad). **C.** α = π/2(rad). **D.** α = - π/2(rad).

**Câu** **33.** Trong thí nghiệm Y-âng về giao thoa ánh sáng, hai khe được chiếu bằng ánh sáng trắng có bước sóng từ 380nm đến 760nm. Khoảng cách giữa hai khe là 0,8mm, khoảng cách từ mặt phẳng chứa hai khe đến màn quan sát là 2m. Trên màn, tại vị trí cách vân trung tâm 3mm có vân sáng của các bức xạ với bước sóng

**A.** 0,48 μm và 0,56 μm **B.** 0,40 μm và 0,60 μm **C.** 0,45 μm và 0,60 μm **D.** 0,40 μm và 0,64 μm

**Câu** **34.** Vật dao động điều hòa khi vật qua vị trí cân bằng có vận tốc là 40cm/s. gia tốc cực đại của vật là 1,6m/s. Viết phương trình dao động của vật, lấy gốc thời gian là lúc vật qua vị trí cân bằng theo chiều âm.

**A.** x = 5cos(4πt + π/2) cm. **B.** x = 5cos(4t + π/2) cm.

**C.** x = 10cos(4πt + π/2) cm. **D.** x = 10cos(4t + π/2) cm.

**(END.6066.00)Câu** **35.** Trên mặt nước có hai nguồn kết hợp A và B cách nhau 46 cm dao động cùng biên độ cùng pha theo phương vuông góc vói mặt nướcNếu chỉ xét riêng một nguồn thì sóng do nguồn ấy phát ra lan truyền trên mặt nước với khoảng cách giữa 3 đinh sóng liên tiếp là 6 cm. Số điểm trên đoạn AB không dao động là

**A.** 40. **B.** 27. **C.** 30. **D.** 36.

**Câu** **36.** Hai con lắc đơn treo cạnh nhau có chu kỳ dao động nhỏ là T1 = 4s và T2 = 4,8s. Kéo hai con lắc lệch một góc nhỏ như nhau rồi đồng thời buông nhẹ. Hỏi sau thời gian ngắn nhất bao nhiêu thì hai con lắc sẽ đồng thời trở lại vị trí này?

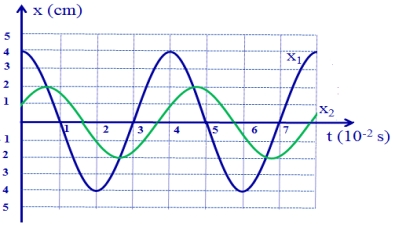
**A.** 8,8s. **B.** 12s. **C.** 6,248s. **D.** 24s.

**Câu** **37.** Trên mặt nước nằm ngang duy trì hai nguồn sóng kết hợp A, B dao động với cùng biên độ, cùng tần số và cùng pha.Cho biết tốc độ truyền sóng trên mặt nước là 1 m/s. Xét hai gọn sóng cùng loại, gợn thứ nhất đi qua điểm M có MB − MA = 5 cm, gợn thứ ba đi qua điểm N có NB − NA = 10 cm. Tần số dao động của hai nguồn là

**A.** 10 Hz. **B.** 20 Hz. **C.** 50 Hz. **D.** 40 Hz.

**Câu** **38.** Chất phóng xạ poolooni  phát ra tia  và biến đổi thành chì . Cho chu kì của  là 138 ngày. Ban đầu (t = 0) có một mẫu pôlôni chuyên chất. Tại thời điểm t1, tỉ số giữa số hạt nhân pôlôni và số hạt nhân chì trong mẫu là 1/3. Tại thời điểm t2 = t1 + 276 ngày, tỉ số giữa số hạt nhân pôlôni và số hạt nhân chì trong mẫu là

**A.** 1/15. **B.** 1/16. **C.** 1/9. **D.** 1/25.

**Câu** **39.** Một vật tham gia đồng thời hai dao động điều hoà cùng phương, cùng tần số với các phương trình x1 = A1cos(ωt +φ1) và x2 = A2cos(ωt +φ2) với đồ thị li độ của các dao động thành phần theo thời gian được biểu diễn như hình vẽ. Phương trình dao động tổng hợp của vật là

**A.** x =2√7cos(50πt - 0,33) (cm).

**B.** x =2√7cos(50πt + 0,33) (cm).

**C.** x =2√3cos(100πt - 0,50) (cm).

**D.** x =2√3cos(100πt + 0,50) (cm).

**Câu** **40.** Cho mạch điện AB mắc nối tiếp lần lượt gồm: cuộn dây thuần cảm L, điện trở thuần Ω, tụ điện có điện dung C và điện trở thuần . Gọi M là điểm nối giữa R1 và tụ điện C. Điện áp giữa hai đầu đoạn mạch là V. Khi mắc ampe kế lí tưởng vào MB thì ampe kế chỉ 1 A. Khi bỏ ampe kế ra và mắc vào hai đầu MB một vôn kế (có điện trở rất lớn) thì hệ số công suất của đoạn mạch AB đạt cực đại. Số chỉ vôn kế là

**A.** 50 V. **B.** 100 V. **C.** . **D**. .

**HƯỚNG DẪN ĐÁP ÁN VÀ LỜI GIẢI CHI TIẾT**

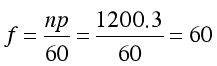
|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1.A** | **2.D** | **3.D** | **4.A** | **5.B** | **6.C** | **7.C** | **8.D** | **9.B** | **10.A** |
| **11.C** | **12.A** | **13.D** | **14.A** | **15.C** | **16.B** | **17.B** | **18.C** | **19.B** | **20.D** |
| **21.D** | **22.B** | **23.B** | **24.C** | **25.C** | **26.D** | **27.B** | **28.C** | **29.B** | **30.C** |
| **31.A** | **32.B** | **33.B** | **34.D** | **35.C** | **36.D** | **37.D** | **38.A** | **39.A** | **40.B** |

**C**

**Câu 24:**

Số prôtôn= Z=27 ; số nơtron N=A-Z=33

**Câu** **25.**

Hz

***Câu*** ***26.***

Ta có: , so sánh thì giá trị a = -4 x là thỏa mãn

**Câu** **30.**

= 0,12.10.1,5.sin900= 0,144N

**Câu** **31.**



**=>**λ0 = 0,276µm đáp án B

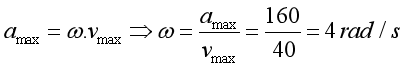
***Câu*** ***32.***

Để Amin thì mà

**Câu** **33.**



 k = 2 và 3 => đáp án B

**Câu** **34.**

Ta có:



A =

Vậy so sánh đáp án ta chọn D

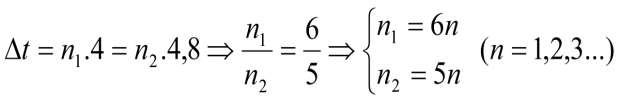
**Câu** **35.**

Khi chỉ có một nguồn, giữa 3 đỉnh sóng liên tiếp có 2 bước sóng nên 2λ = 6 cm hay λ = 3 cm.

Chọn C

**Câu** **36.**

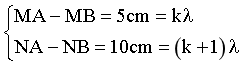
Ta có:



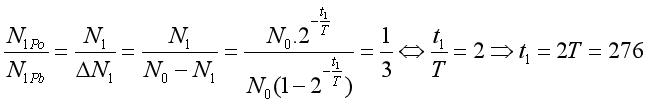
**Vậy:**



**Câu** **37.**

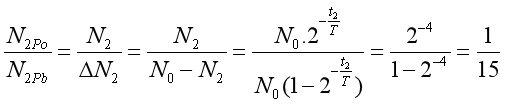
Vì hai vân cùng loai nên chúng phải có cùng quy luât:

 Chọn D

**Câu** **38.**

\* Tại thời điểm t1: ngày



\* Tại thời điểm t2 = t1 + 276 = 552 ngày => tương tự có:

**Câu** **39.**

Từ hình vẽ ta có T= 4.10-2s =>ω = 50π rad/s.

A1=4cm => x1 = 4cos(ωt +φ1) = 4 => khi t=0 => φ1 = 0

A2=2cm => x2 = 2cos(ωt +φ1) = 4 => khi t=0 => x2=1 và v2>0 => φ2 = - π/3

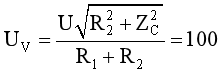
A2 = A12 + A22 +2. A1. A2 cos(∆φ) == A12 + A22 +2. A1. A2 cos(π/3) => A=2√7 cm

tan φ= (A1sin φ1) + A2sin φ2)/(A1cosφ1) + A2cosφ2) => φ =0,33rad/s =. Chọn A

**Câu** **40.**

Khi mắc ampe kế lí tưởng vào MB thì ampe kế chỉ 1 A thì ta có Ω

Khi bỏ ampe kế ra và mắc vào hai đầu MB một vôn kế (có điện trở rất lớn) thì hệ số công suất của đoạn mạch AB đạt cực đại thì ta có Ω

Vậy chỉ số của vôn kế là V